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NEWS SUMMARY

GENERAL

'ietnam strikes nto China'

tnam has struck back at na, sending forces 15 miles de Chinese territory, but the ek has been repulsed, the China News Agency orted.

hinese troops were reported ave thrust 25 miles inside tnam, with fierce fighting g on around the provincial ital of Lang Xon, and the tnamese said to be withwing.

i Peking, the People's Daily e a strong hint that the nese may refuse to withdraw n Vietnam until the tnamese have agreed to otiate on border issues. k and Page 4; Editorial ment Page 22

orth Yemen aid

has sent $100m military aid North Yemen to help it fight South Yemenis. Saudi bia has offered a peace plan end the fighting and called all Arab states to support it. k Page

hatcher call

y leader Mrs. Margaret tcher urged the Scottish torate to vote "No" in the thcoming referendum on olution, and so preserve the ty of the UK. Back and e 10

min 'in danger'

ht-year dictatorship of nda President Idi Amin is danger of collapse as Tanian troops and Uganda exiles reported moving closer to pala, the capital. Page 4

viet hijack

people protesting about ditions inside the Soviet ion hijacked a Soviet airliner a flight from Oslo to Moscow tried to set off petrol bombs board before being overered.

d Bailey guard

hiest security ever seen at Old Bailey went into opera- for two separate hearings ting to alleged Middle East orist activities in London. three accused pleaded not ity to the charges.

itons freed

Britons working on a ence contract in Iran—Don ns and Eric Sant—were d from custody after being ined since Friday by revoluary forces in Tehran.

njay sentence

jay Gandhi, son of the for- Indian Prime Minister, was enced to two years orous imprisonment" in a involving a charge of concy to steal a film. His cosed, Vidya Charan Shukla, rmer Minister, received the sentence.

errilla raid

onalist guerrillas using range heavy artillery ked a South African air in South-West Africa. ary headquarters in Windsaid. The guerrillas fired hells but every one missed.

efly . . .

an archeologists have uned the 3,800-year-old tombs the Princes of Ebla, an nt city in Syria.

of UK second divorces is asing, the Office of Popun Censuses and Surveys

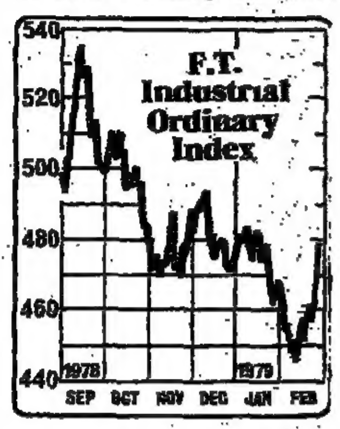
George-Brown, former ign Secretary, intends to in Derbyshire as an indeent candidate in the pean elections.

ese twins born just over ek ago at Maidstone, Kent, died.

BUSINESS

Equities up 10.8; Gold falls $½

● EQUITIES benefited from revived institutional support and the FT ordinary index rose



10.8 to 479.6, its biggest single-day gain for over three months.

● GILTS attracted further widespread foreign investment and the Government Securities index rose 1.89 to 69.94.

● STERLING rose 15 points to $2.0225 and its trade-weighted index at 64.3 (64.2) was the highest since last March. The dollar's depreciation narrowed to 8.2 per cent (8.3).

● GOLD fell $½ to $247½ in London.

● WALL STREET was 15.33 down at 805.79 just before the close.

● TRADED options reached a new high for the second day running, with 1,865 contracts made compared with 1,610 on Monday.

● MAN, the German commercial vehicles and engineering group, has signed a letter of intent to purchase a majority holding in the U.S. truck manufacturer, White Motor. Back Page

● WORLD SHIPBUILDING order book fell to its lowest level for over 13 years last quarter, according to latest returns from Lloyd's Register. Page 3

● EEC Industry Commissioner has appealed to Europe's largest pharmaceutical companies for closer co-operation in tackling pricing and trading issues. Page 2

● OECD has drawn up a voluntary code to curb the use of transfer pricing by multinational companies to reduce their tax liability. Page 2

● BELFAST port is to go ahead with a £20m investment programme to modernise dock facilities in the next five years. Page 8

● CIVIL SERVANTS' unions are totally opposed to the Government's plan to recruit experienced industrialists to top Civil Service posts. Page 6

● ROLLS-ROYCE Board have approved plans to set up an aero-engine overhaul and repair plant in the U.S.

COMPANIES

● NATIONAL WESTMINSTER Bank pre-tax profits for 1978 rose by 25 per cent to a record £297.4m, on second half profits up from £127.75m to £188.83m. Page 28 and Lex

● COMET RADIOVISION has made a recommended takeover bid of 150p a share for Caledonian Holdings, which values Caledonian at £15m, and is £8.5m higher than Caledonian's flotation value of £6.5m a month ago. Page 25

● COMMERCIAL UNION reports a recovery in underwriting from a loss of £20.9m to £2.9m profit in 1978, raising group pre-tax profit to £142.2m (£99.8m). Page 24 and Lex

● IMI pre-tax profits for 1978 fell from £34.2m to £32.01m on sales 12 per cent up at £524.01m. Page 24 and Lex

EF PRICE CHANGES YESTERDAY

es in pence unless otherwise indicated)

RISES

q. 10pc 1983...£91⅞	+ 2⅛	
, 15¼pc 1998...£112⅞	+ 3⅛	
. 13¾pc 2000-03 £21⅞	+ 2⅛	
Props.	103	+ 11
l. Dairies	220	+ 14
lnds.	320	+ 11
it (G.)	126	+ 8
Circle	272	+ 15
r McConnell	272	+ 14
n (J.)	424	+ 12
n A	233	+ 12
onian Hldgs.	141	+ 10
nercial Union	154	+ 5
in	166	+ 10
al Accident	212	+ 10
	346	+ 9
and Metal	130	+ 7
	515	+ 23
n Motor	124	+ 11
Shanghai Bnkg.	296	+ 17

Jacksons Brne. End	148	+ 8
London Prov. Shop	167	+ 9
MFI Furniture	250	+ 14
NatWest	327	+ 17
Ricardo	335	+ 23
Saatchi and Saatchi	166	+ 9
Saga Holidays	204	+ 9
Status Discount	270	+ 11
Sunley (B.)	296	+ 12
Unilever	582	+ 20
Utd. Scientific	282	+ 18
Guthrie Corp.	485	+ 12
Lunuva	278	+ 13
Anglo-Amer. Coal	875	+ 45
Anglo Amer. Corp.	390	+ 9
FALLS		
Campari	97	− 5
Grindlays	126	− 7
Wilmot-Breeden	90½	− 6½
Loraine	78	− 5
South African Land	80	− 5

Miners' leaders agree to '9%' coal board offer

BY CHRISTIAN TYLER, LABOUR EDITOR

Miners' leaders yesterday gave the Government its best news of the troubled winter wage round when they voted 15-10 to recommend to their 230,000 members a £72.5m offer from the National Coal Board.

Last night no one was putting percentage or cash value on the offer, but it appears to be worth at least 9 per cent on earnings. With a promise of an increase in existing area bonus schemes and some special allowances, it could work out at £90m, or more than 10 per cent on average.

The settlement is important for the Government as it provides an opportunity to say that its political alliance with the unions is still working well.

The executive of the National Union of Mineworkers will decide next Thursday whether to put the offer to a pit-head ballot.

Yesterday's decision, which will almost certainly lead to a peaceful settlement, means that the Government has a chance of keeping other powerful groups like electricity supply workers and railwaymen to the same kind of deal.

It could also lend support to the Prime Minister's claim on Monday that this year's increase in national earnings could work out lower than last year's.

Both Sir Derek Ezra, Coal Board chairman, and Mr. Joe Gormley, president of the union, said after day-long talks that the negotiations had been distinguished by their "responsibility" and full disclosure of the Board's financial situation throughout.

The offer is in four parts. There is a £27.5m basic increase, contingent on an increase in the Board's operating subsidy, which it hopes to see rise from £174m this financial year to £250m next year. The Board has already declared a price rise of 9 per cent from next month to help meet part of the offer.

Payments

Secondly, the Board has put on the table £45m, which it says will be self-financing and paid for by a separate agreement on efficient working to cut down on stoppages, improve machine running times and travelling times to and from the coalface.

As well as payments in advance for this efficiency, this part of the agreement could increase the miners' own output bonus earnings.

Thirdly, the value of the standard output target at the face would be increased from £23.50 a week to £26.50. This could be worth eventually some £2.50 a week for the miners on top of the £72.5m package.

Mr. Gormley said there will be an improvement in the unsocial hours payment of 5p an hour, and a joint working party to consider the old claim for washing and winding time pay, which should produce money from next January.

The deal would run from March 1 for 12 months.

Claims for a four-day week and earnings protection for men forced to return to the surface have not been met.

If yesterday's money is spread evenly, it could be worth £6.50 a week, according to some union estimates. The increase on the old basic rates, unchanged since 1975, could be as much as 13 per cent, but much of that would come from consolidation of the Phase Two incomes policy supplement.

The union had demanded rises of between 20 and 40 per cent, to raise minimum earnings of the face-worker from £78.44 to £110 a week, and to give the surface worker a new basic of £66 a week.

Begin refuses to attend Carter Mid-East summit

BY DAVID LENNON IN TEL AVIV

ISRAEL'S CABINET yesterday rejected President Carter's invitation to Mr. Menahem Begin, the Prime Minister, to attend a Middle East summit meeting this weekend at Camp David with Mr. Mustapha Khalil, the Egyptian Prime Minister.

The decision plunges the Egypt-Israel peace negotiations into the deepest crisis of the past 15 months and deals another blow to the prestige of Persident Carter.

The Cabinet decided that as the Egyptians had adopted a tougher stance at last week's ministerial-level talks at Camp David, there was no point in Mr. Begin attending a meeting with Mr. Khalil. However, Mr. Begin said he would meet President Carter if he was invited.

The Cabinet voted 14-2 against Mr. Begin accepting the summit invitation, following the refusal of President Anwar Sadat of Egypt to participate.

The Americans had hoped to start the meeting tomorrow or Friday.

Mr. Moshe Dayan, the Israeli Foreign Minister, reported to the Cabinet on his talks at Camp David last week with Mr. Mr. Khalil and Mr. Cyrus Vance, the U.S. Secretary of State.

Mr. Dayan disclosed that Egypt had hardened its position on the key question of the link between the Egypt-Israel treaty and self-rule for the Palestinians living in the occupied West Bank and Gaza Strip.

The Egyptian Prime Minister reportedly proposed detailed fomulations which it wanted to see included in the peace treaty. Israel opposes any binding links between implementation of the agreement with Egypt and progress on the Palestinian issue.

A Cabinet communique said: "It is now evident that in the Camp David talks no progress was made towards an Israeli-Egyptian agreement. On the contrary, a more extreme position was presented by the Egyptian delegation.

"In addition to the previous Egyptian proposals which were unacceptable to Israel, new proposals were made which are inconsistent with the Camp David agreement of September 17, 1978, and in fact nullify the meaning of the peace treaty between the two countries."

The Cabinet declared that the Egyptians had ... Israeli counter-proposals and ... insisted that the Egyptian proposals be accepted.

"Under these circumstances, the Cabinet decided that the Prime Minister is in no position to participate in the proposed meeting with Mr. Khalil," the communique continued.

The Israeli Government does not foresee a resumption of the ministerial-level talks, but ex-

Continued on Back Page

Steel users oppose price rises

BY ROY HODSON

BRITISH STEEL Corporation proposals to raise the prices of many steel products by about 7 per cent from April 1 will be opposed by major steel-using industries.

The Corporation is believed to want somewhat higher increases for alloy steels, reckoning the British market for those types to be sufficiently robust to withstand them. It may not seek increases for flat products where the market remains weak and a big volume of imports is giving the British Steel products severe competition.

A crucial meeting with representatives of such big steel users as the car industry, the process plant makers and the can makers will be held today.

The British Iron and Steel Consumers' Council complained last night that British steel prices are already among the highest charged in the European Community. It calculates that British prices have risen by 31 per cent since 1976, compared with 13 per cent in West Germany, 15 per cent in Belgium, and 9 per cent in the U.S.

The council is likely to appeal to the Government against the proposals on the grounds that general increases would erode the competitiveness of the steel-using industries.

If the corporation applies higher prices the private-sector steelmakers are certain to charge the higher levels themselves for similar products. The British Independent Steel Producers' Association said yesterday that its members would be unlikely to take any action on prices until British Steel gives a lead.

Because the basic forms of steel fall under the provisions of the Treaty of Paris, they are outside the jurisdiction of the Prices Commission.

But some products for which higher prices are sought may fall within the commission's terms of reference, so British Steel is anxious to settle a new price structure with its major customers in time to give the commission 28 days' notice before April 1.

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FEATURES

For latest Share Index phone 01-246 8026

Iran oil exports start on Monday

By Kevin Done in London and Simon Henderson in Terhan

IRAN IS to resume oil exports on Monday, but the first limited sales will be arranged directly by the National Iranian Oil Company and are likely to go to the highest bidder.

Mr. Hassan Nazih, NIOC managing director, said yesterday that he hoped for prices of between $18 and $20 a barrel: before the crisis broke in Iran last autumn, the official selling price of Iranian light crude was $12.81 a barrel, with a 14.5 per cent rise due by October this year. The present price of Arabian light, the marker crude, is $13.34

According to U.S. oil industry executives, however, NIOC has apparently made a direct aproach to at least two independent U.S. oil companies.

Ashland and Amerada Hess, offering export cargoes at $24 a barrel for light crude and $23 for heavy. Ashland is reported to have shown no interest.

Iran's move to sell its first export cargoes of crude since December 26 on the open spot market has created fresh uncertainty in world oil markets.

Before the revolution most of Iran's crude was produced by a consortium of Western oil companies, led by British Petroleum, which had a 40 per cent share. Apart from NIOC's direct sales, most of Iranian export crude was lifted by consortium companies, including Shell, Exxon, Mobil, Texaco, Gulf, Socal and Total.

Mr. Nazih said yesterday that the agreement with the consortium was under review. "We will not be willing any longer to deal with the consortium under the past conditions. We will not give any discounts."

It is understood that crude was previously sold to the consortium at a discount of 18 cents a barrel.

Some members of the consortium had feared that Iran would sever all links with it, but Mr. Nazith's statement yesterday suggests that the new Government would be prepared to renegotiate the marketing agree-

Continued on Back Page
Other developments Page 4

UK rationing

Several UK oil companies have started to ration supplies of oil products, such as petrol, heating oil, diesel and fuel oil, to their dealer and distributor networks, because of the shortage of crude oil on world markets.
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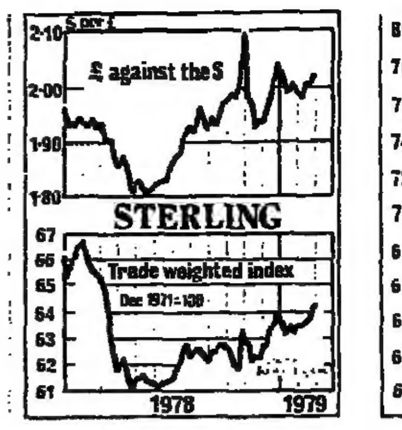

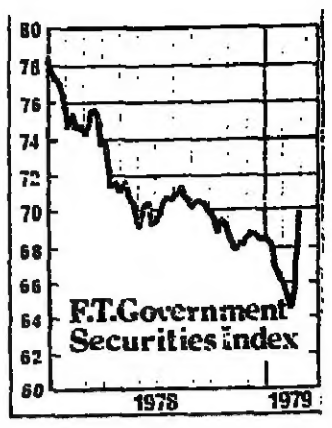

Gilts and £ rise sharply

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

PRICES OF gilt-edged stocks and equities rose sharply yesterday and sterling advanced against other major currencies as the turnround in investment attitudes among City institutions in the last fortnight developed into near euphoria.

The new long-dated stock, 2000-03, jumped by 2⅛ points to £21⅞ where it is showing a profit of 45 per cent over the £15 per cent partly paid issue price of last week. This is a record gain on a gilt-edged issue in such a short period.

Dealers reported a shortage of stock in the absence of any official taps on offer. This was reflected in a 2⅞ per cent increase in the FT Government Securities Index yesterday for a rise of 8¼ per cent since the 1978-79 low earlier this month.

The enthusiasm has also infected the equity market where the FT Industrial Ordinary share index jumped by 10.8 to 479.6, the biggest increase in a day since mid-November.

The strength of gilts and, more recently, of equities has occurred since the rise in Minimum Lending Rate nearly three weeks ago, which led to a rise in gilt yields. There is also now greater market confidence about the Government's commitment to its monetary and borrowing targets and to the stability of sterling.

This view has in turn affected foreign institutions, attracted by the high return in the UK relative to the rest of the world.

After its sharp rise on Monday, the pound made only small gains yesterday, partly because of a late rally in the dollar. Sterling closed 15 points higher at $2.0225 while the trade-weighted index increased 0.1 to 64.3, its highest level since mid-March 1978.

Since the low point for financial markets three weeks ago, this index has risen by more than 1½ per cent, while sterling has gained 3½ per cent against the recently weak Japanese yen.

The Bank of England appears to have intervened occasionally, as it did yesterday, to check the rise, though inflows of foreign currency have so far apparently been on nothing like the scale of 1977.

The authorities do not appear to be particularly worried about the impact of the inflows on the control of the money supply; they are more concerned about the effects of the current exchange rate on the competitive position of British goods in view of the rapid growth of unit labour costs.

There are differences of emphasis, both within and between the Treasury and the Bank of England, but any significant relaxation of exchange controls appears to be have been ruled out for political reasons, at least until the election.

The authorities seem to be taking a wait-and-see attitude on the domestic monetary front and appear to be in no hurry to issue new tap stocks or to reduce Minimum Lending Rate from its present 14 per cent.

Editorial comment Page 22

FFI Eurosterling bond

THE increased overseas interest in gilts has prompted Finance for Industry, an agency owned by the clearing banks and the Bank of England, to issue a £10m Eurosterling bond. This is the first such bond to have been issued since last April.

The new bond will carry a coupon of 13 per cent and will be priced at par. The bond will mature in 1991, though its average life will be nine years.
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£ in New York

	Feb. 26	Previous
Spot	$2.0210-0220	$2.0135-0145
1 month	0.39-0.34 dis	0.42-0.38 dis
3 months	1.03-0.95 dis	0.92-0.87 dis
12 months	3.25-3.05 dis	3.05-2.95 dis

WEST GERMAN WORKER PARTICIPATION

Court rules on validity tomorrow

BY ADRIAN DICKS IN BONN

THE FEDERAL Constitutional Court in Karlsruhe, West Germany's highest judicial body, is to rule tomorrow on the constitutional validity of the 1976 worker participation Act.

According to several newspapers, the court will reject a challenge to the Act brought in the summer of 1977 by a group of 29 employers' federations and nine big industrial companies. Court officials refuse to comment on the reports.

Should the claims prove correct, the Constitutional Court will have removed the most obvious of the public differences between the two sides of West German industry. But should the Court uphold the employers' objections to the Act, an outburst of anger is likely from the trade unions. The cohesion of the Social Democrat-Free Democrat coalition of Chancellor Helmut Schmidt would also be threatened.

Lawyers for the employers' side have argued that they do not oppose the Act as such, but want clarification of its meaning for the constitutional right of property-owners (in this case shareholders) to do as they wish with their property. The employers argued that this right has been called in question by the Act's requirement that supervisory boards of companies should be composed of equal numbers of shareholders' and employees' representatives.

The unions, with the support of three Federal Cabinet Ministers, have pointed to the unanimous parliamentary approval of the Bill and to the fact that the chairman of the newly constituted supervisory boards have come from the shareholders' side in almost every case and are armed with a second tie-breaking vote that guarantees ultimate control by the owners.

The reported version of the judgment would appear to accept the union and Government view of the Act, while adding the rider that any move to push further in the direction of workers participation (as the unions would like to do) would indeed cross the frontiers of what the court thinks constitutionally acceptable. While neither side could be expected to be fully satisfied with such a solution, it appears unlikely that either would attempt to take the matter further.

From the Government's point of view, however, the way would appear to be open to press the unions to return to the concerted action conference—the periodic round-table meetings that for over a decade set out basic assumptions of economic policy which were endorsed by unions, employers and public bodies alike. The unions began a boycott of the conferences as a protest over the case against the worker participation Act.

Sweden detains Aeroflot hijackers

Swedish police have taken into custody two men and two women who threatened to blow up a Moscow-bound Aeroflot TU 134 airliner after taking it over shortly before it landed at Arlanda airport near Stockholm, writes John Walker in Stockholm. There were 24 passengers aboard.

A Swedish man, an Indian man, and a Brazilian and West German woman boarded the plane in Oslo, and apparently took it over to protest against conditions in the USSR. The Brazilian women, and perhaps other hijackers, have sought political asylum in Sweden.

Italian farm prices

Italy wants higher EEC farm prices or a devaluation of at least 10 per cent of its "green lira," Sig. Giovanni Marcora, the Agriculture Minister, said in a magazine interview, Reuter reports from Rome. EEC Farm Ministers are due to discuss the issue of agricultural prices at a meeting in Brussels on March 5.

Romania—EEC talks

Romania yesterday became the first member of Comecon to begin negotiations with the Common Market on a trade agreement, Reuter reports from Brussels. The aim is an accord on all sectors of trade, except steel and textiles which are covered by existing arrangements, Common Market officials said.

Norway trade gap

Norway's trade deficit narrowed sharply to NKr 1.9bn (£185m) in 1978 from NKr 19.9bn (£1.93bn) the previous year, preliminary figures from the Central Bureau of Statistics show, Reuter reports from Oslo. Exports of goods and services totalled NKr 87.7bn, compared with NKr 76.3bn the previous year; total imports fell to NKr 89.6bn from NKr 96.2bn.

W. German recovery

West Germany's economic recovery is gaining momentum despite the harsh winter and the effects of a six-week steel strike which ended last month, the Economics Ministry said yesterday, Reuter reports from Bonn. Although unemployment in January reached 1,170,000, the highest figure since 1975, the Ministry attributed this to the bad weather.

Cyprus to save fuel

Cyprus is to step up efforts to conserve oil and is embarking on a programme to develop solar energy for domestic and agricultural purposes, writes our Nicosia correspondent. Mr. A. Papageorghiou, the Minister of Commerce and Industry, says Cyprus spent C£31m (£43.4m) on oil imports last year—representing 11 per cent of all imports and 30 per cent of domestic exports.

Turkey prepares for Paris aid talks as 1979 budget settled

BY METIN MUNIR IN ANKARA

Mr. Ziya Muezzinoglu, the Turkish Finance Minister, is expected to leave for Paris this week for talks with the OECD which is co-ordinating a multinational emergency aid programme to salvage the Turkish economy.

The talks were scheduled for last week in Bonn, but were put off at Mr. Muezzinoglu's request. He wanted to stay in Ankara to see the legislation of the 1979 budget through and launch an action programme designed to stabilise the economy.

The budget, amounting to the equivalent of some $18bn, was passed yesterday by a National Assembly vote of 228 against 213.

The action programme is expected to be announced before Mr. Muezzinoglu's trip to the French capital, expected next Friday. Unless there is a major disagreement the Cabinet should complete its package in a few days.

It is understood that the widely expected devaluation of the Turkish lira will not be a part of the package. Mr. Ecevit is reported to feel that a devaluation would be of no benefit to the Turkish economy until there is an infusion of fresh funds which would enable industry to function in a more normal atmosphere.

The Paris talks are described by Turkish officials as an exchange of views rather than negotiations. With the budget and the action programme in his pocket Mr. Muezzinoglu hopes to convince the OECD—and through it the Western states and the international financial community—that his government is serious in its efforts to come to grips with Turkey's worst economic crisis.

Mr. Emile van Lennep, the OECD Secretary General, and Herr Peter Hermes, the State Secretary of the German Foreign Ministry, will brief Mr. Muezzinoglu on Turkey's prospects for raising funds through the OECD.

The Organisation's co-ordination work started after the Guadeloupe summit where the leaders of the U.S., UK, France and West Germany decided to help Turkey.

The reaction of the western and Arab oil states polled by Mr. Van Lennep was "largely positive," diplomats here say. However, they wanted to know what measures Ankara planned to take to reactivate its suspended relations with the IMF.

$80m grain case verdict upheld

NEW YORK — Continental Grain said yesterday that a British court had upheld a decision requiring Turkey to pay a subsidiary of the company $80m (£40m) as a result of defaulting on a grain sale in 1975.

The award, believed to be the largest of its kind, includes damages and interest.

The case arose out of a deal between Finagrain, a Continental subsidiary, and Toprak Mahsulleri Ofisi, the Turkish Government grain organisation, for the sale of 350,000-385,000 metric tons of wheat.

After the arrangement, the grain price dropped below the price Toprak had agreed to pay, the company said. Subsequently, the Turkish Government "refused to allocate foreign exchange for the letter of credit under which deliveries were to be made."

Irish economy forecast to grow 5% this year

BY OUR DUBLIN CORRESPONDENT

THE IRISH economy should grow by 5 per cent this year, according to a forecast in the quarterly review of Allied Irish Banks. This compares with the Government's target of 6.5 per cent and the opposition's expected 4 per cent.

The banks' forecast, compiled by Dr. Brendan Menton, a former senior adviser to the Department of Finance, sees the extra growth coming from the build up of stocks in agriculture and industry, plus the assumption that the Government will not meet its target for reducing public spending.

The review also expects double figure inflation to return, way outside the Government's hope of 5.5 per cent. It also assumes that the European monetary system (EMS) will get under way and that Ireland will receive the agreed grant in 1979. Dr. Menton, however, does not expect membership of the EMS to result in inflation falling before 1980.

He is optimistic about exports which he predicts will grow by 12 per cent, basing his expectation on an assumption that world trade will grow by 6.5-7 per cent this year.

Although the review's growth projection is below the Government's, if correct it would give Ireland the highest rate in the EEC for the third successive year. In the meantime, it will provide Ministers with ammunition in their battles with the opposition.

General sets the pace in Granada

BY ROBERT GRAHAM

PARTY OFFICIALS in Granada talk about "winter elections" and "summer elections." They have good reason to do so. Granadines like to do things outside and in warm weather, but torrential rains and unseasonal cold has forced the Spanish general election campaign indoors—into hotels, bars, cinemas, schoolrooms, and, in the countryside, even barns.

The campaign on the streets seems to be being waged by proxy through the mass of posters that this town's 40,000-strong student population has needed little encouragement to plaster on walls, pillars and doors.

The most striking poster campaign is that being waged by Coalicion Democratica (CD)—the coalition of right-wing forces grouped around the veteran Franquist minister Sr. Jose Maria Areilza and his friend Sr. Manuel Fraga, leader of Alianza Popular (AP).

The campaign is striking not for its originality but for its sheer energy and the obvious amount of money behind it. A particularly ubiquitous poster is one on black with the slogan etched in white: "Prieto—Law and Order."

General Prieto is the only member of the military establishment standing for Parliament. Eased out of a senior Guardia Civil post last year, he has been embraced by the recently formed CD party as a prize candidate. Gen. Prieto on his own admission is standing to ensure that the disaffected military has a say in Parliament.

Here in Granada he is a well-known figure. For close on 30 years his military career has been associated with Granada, including his period as the commander of the Guardia Civil. His critics say he regards Granada as his fiefdom.

Nothing would give certain sections of the armed forces and police, plus the entire right-wing bloc in Spain, greater satisfaction than to see Gen. Prieto obtain one of the seven seats being contested here for the Lower House of Parliament.

It would be interpreted as a direct rebuff to the Government's policies. Precisely because of this, his candidature has threatened the voting pattern of June 1977 which saw four deputies returned for Sr. Suarez' Union de Centro Democratico (UCD) and three for the Socialists (PSOE).

UCD, the Socialists, the Communists, and CD are the four parties in the running to obtain a share of the seven seats for the lower house for Granada city and province. But of these, CD is undoubtedly the joker in the pack. Because Gen. Prieto is something of a public figure (and a personable one) he could draw votes in his own right.

In the June 1977 elections Sr. Fraga's AP party obtained 6.9 per cent of the vote from the same base on which he is now counting — conservative landowners, bureaucrats and the prosperous bourgeoisie that is well established here. This base can only be enlarged by attracting disaffected members of Sr. Suarez' UCD party or looking further to the right among the Fascist groupings.

The other three parties are all presenting uncontroversial lead candidates, who reflect faithfully the kind of images they are seeking to project nationally.

All three are lawyers. The main UCD candidates, Sr. Antonio Jimenez Blanco, headed the UCD group in the Senate (upper house) and is a native born Granadine. Sr. Jose Vida Soria, the main Socialist candidate, was on the constitutional drafting committee in the Senate and teaches at Granada University.

The principal Communist candidate, Sr. Jaime Ballesteros, is a member of the Central Committee. On the whole they are pitching the campaign on national issues and at a national level—jobs, inflation and responsible government. Yet when there are so many pressing local issues out of which political capital could be made, this is quite surprising.

Granada ranks in income terms 49th out of 50 provinces in Spain. The city itself is a sad example of cheap and uncontrolled modern development. Starved of good road communications, industry was not really established itself here while insufficient use has been made of tourist potential.

OECD unveils its code to curb transfer pricing by multinationals

BY ARNOLD KRANSDORFF

A VOLUNTARY code aimed at curbing the use of transfer pricing by multinational companies to reduce their tax liabilities has been drawn up by the Organisation for Economic Co-operation and Development (OECD).

The OECD has spent at least five years working on guidelines for transfer pricing, which is the system under which one company subsidiary charges another for goods or services it supplies. Where the subsidiaries are in different countries, transfer pricing can be operated to ensure that most profits are earned in the area with the lower tax rate.

According to an OECD spokesman, the 24 member countries have reached consensus on a broad code which had been drawn up with the co-operation of some multinational companies. The recommendations, produced by the OECD's committee on fiscal affairs, will be formally presented to member countries in April and a full report will be published in July.

Mr. K. Messere, head of the OECD's tax division, said that, in essence, the guidelines will recommend that multinationals should adopt the same pricing policies as those followed by unrelated enterprises. They will apply to the transfer pricing of resources such as goods, services, patents, royalties and loans, he said.

Many governments have expressed concern in the past that multinationals have been able to move profits artificially from high tax countries to low tax countries, thereby avoiding considerable tax liabilities.

Meanwhile, the OECD is unlikely to make any changes to its international investment guidelines for multinational enterprises, which are currently under review.

A spokesman said that the committee engaged in the review was satisfied that the existing code, also voluntary, which was approved by the OECD in June, 1976, "was perfectly satisfactory."

This verdict will be given to the OECD's annual ministerial meeting later this year, he predicted.

The code was introduced by the OECD as part of a package of measures aimed at improving the climate for international investment, covering both the responsibilities of the multinationals and those of governments in providing a stable framework within which companies can operate.

Host nations are expected to give the same treatment to foreign-controlled companies as to national enterprises and to take into account the interests of other countries in designing incentives (or disincentives) for international investment.

For their part, multinationals are recommended to follow certain guidelines in conducting their operations in OECD countries — they include refraining from any improper involvement in local politics, disclosure of information such as intra-group pricing, and observing standards of employment and industrial relations not less favourable than those of comparable employers in the host country.

The OECD guidelines are being used by the United Nations as a basis for an internationally-agreed code of conduct, which is due for discussion at the UN's Commission on Transnational Corporations next meeting in New York during May.

Viscount Etienne Davignon

Commission warning to drug companies

By Giles Merritt in Brussels

EUROPE'S main pharmaceutical companies have been urged to co-operate more closely with the Brussels Commission on questions of drugs pricing and labelling.

Viscount Etienne Davignon, the EEC Industry Commissioner, speaking at the first general meeting of a powerful new trade grouping in Brussels yesterday, warned that failure to consult could be to the pharmaceutical industry's own cost.

He told delegates to the conference of the Brussels-based European Federation of Pharmaceutical Industries' Association (EFPIA) that such co-operation had been little in evidence in the past.

Viscount Davignon made it plain that the European Commission is examining the practices of drug companies producing or selling in the EEC.

By the end of November 1980, the Commission is due to submit proposals to the Council of Ministers on reducing the substantial barriers to the free movement of medicine inside the Community, and during this year is to set up a special body to investigate the wide price disparities that exist in various member states.

The Commission's activities come at a time of growing concern over the policies of the European pharmaceutical giants. A recent report by the Bureau Europeen de Union de Consommateurs, which links the consumer organisations of the Nine in Brussels, charged the industry with setting prices in different EEC countries simply on the basis of what the market would bear.

Only a fortnight ago a European Court of Justice in Luxembourg upheld a 1976 Commission judgement that Switzerland's Hoffman-La Roche had abused its dominance of the vitamin market, while reducing the fine on the company by one-third.

Viscount Davignon emphasised that the Commission is aware of the cases in which the pharmaceutical industry infringes the Rome Treaty's articles 30 and 35, which concern quantitative restrictions on trade.

But he suggested that a positive approach than turning to the available legal machinery would be for the Commission and the industry to determine jointly the degree to which harmonisation is practicable.

Mr. G. J. Wilkins, president of the EFPA and chairman and chief executive of the Beecham Group, has welcomed Viscount Davignon's call for co-operation.

He indicated that the new trade group, which brings together the previously separate EEC and EFTA associations, is aimed at developing a much closer working relationship with the Commission.

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Austria agrees redundancy law

BY PAUL LENDVAI IN VIENNA

THE AUSTRIAN Parliament has unanimously adopted a law which provides severance pay for manual workers on the basis enjoyed by white-collar employees since 1921. The scheme will come into full operation after a five-year transition period.

After initial resistance, the draft Bill submitted by the ruling Socialist Party was also approved by the main opposition People's Party and the small Freedom Party.

Benefits to workers will be phased in gradually, and from next July 1 workers will be eligible to receive 10 per cent of the severance pay agreed for their job. Each year, 20 per cent more will be payable, rising to the full amount in January, 1984.

This sliding scale, as well as some other fiscal concessions, were agreed in view of the large number of small and medium-sized concerns affected by the legislation.

The Government and industry disagree about the likely cost of the scheme. The latter estimates total costs of Sch 3bn (£110m), while the Government anticipates a figure of about Sch 1.5bn.

Retirement age is 65 years for men and 60 years for women, but the new legislation will allow earlier retirement in special circumstances.

David Marsh, in London, and FT correspondents in Paris, Vienna, Lisbon and New York chronicle the battle to attract Ford's planned $1bn. car plant investment

The pace hots up in Ford's great car race

A TUSSLE of grand proportions is being fought out in Europe involving the personal prestige of the French and Austrian heads of government, the jobs of thousands of workers, and the investment plans of one of the world's largest multinational concerns.

At stake is the location of Ford Motor Company's planned European assembly plant. To come on stream in the early 1980s as part of its plan to sustain its position as the Number 1 U.S. motor concern outside North America.

The plant will bring around $1bn in investment and 8,000 permanent jobs to whatever country plays host to it—a sizeable carrot to the French, Austrian and Portuguese governments, which have emerged as the main bidders for the prize.

Showing the strength of France's desire to attract fresh manufacturing investment, President Valery Giscard d'Estaing will meet Henry Ford II late next month to throw his own personal weight behind the bid to bring the plant to the job-starved steel-making region of Lorraine in north eastern France.

In Austria, Chancellor Bruno Kreisky himself has negotiated three times with senior Ford executives hoping to persuade the company that the site offered at Aspern near Vienna is best suited to Ford's needs.

Portugal—very much an outsider compared with the French and Austrian challengers — entered the field less than a fortnight ago, sending a Government team to Ford Europe's UK headquarters for top-level talks about developing a site at the huge industrial complex at Sines, south of Lisbon.

Spain, which at the onset of the negotiations last year was regarded as a favourite to get the plant, has all but dropped out of the running. The Government, with next month's General Elections more on its mind, showed only lukewarm enthusiasm about the idea of expanding considerably Ford's ultra-modern plant at Almusafes near Valencia and—somewhat to the motor company's pique—sent no more senior a figure than an official from the Ministry of Industry to lead the negotiations.

Not averse to the race being kept as open as possible, Ford stresses that Spain has not been entirely ruled out, and says it will make a definite decision on where the plant will be sited by the middle of the year.

It will be weighing up very plainly the various incentive schemes on offer from the competing Governments together with the logistics—and politics—of where the plant will best fit in with its existing network of European factories employing more than 140,000 people in 15 countries.

Austria has offered Ford "optimal conditions," according to Chancellor Kreisky. Although the Government is not willing to engage in what he called "life or death competition with others," there is no doubting the economic importance which Austria — a big importer of cars from West Germany — attaches to having its own car plant.

Apart from the Chancellor himself, Herr Hannes Androsch, the Vice-Chancellor and Finance Minister, and Herr Leopold Gratz, the Mayor of Vienna, have both held talks with Ford management to put the Austrian case.

They have stressed that Aspern, has a fully developed infrastructure and is close to a canal leading to the Danube, which could be particularly helpful when the Rhine-Main-Danube canal is completed.

In addition to investment grants totalling over Sch 4bn (almost £150m), the municipality of Vienna is also willing to offer the site free of charge. Furthermore, the Austrians have given concrete guarantees about providing a trained labour force and facilities for training skilled workers.

Austria is also making much of its proximity to Eastern European markets, the lack of competition from any indigenous motor industry; and its above-average labour relations—there has been no major industrial strike for the past 15 years.

This last point is viewed as the Achilles' heel of the French authorities' bid to tempt Ford to Lorraine. The Ford top brass who descended on the region in a flotilla of helicopters two weeks ago for talks with local dignitaries, businessmen and trade unionists let it quietly be known that they were worried about the labour unrest in the area. They can hardly have been reassured by last weekend's violent attack on the police station of Longwy in Lorraine by steelworkers embittered by rising unemployment in the area.

The French also admit that the Austrians can provide much more financial assistance than their own offer of some FFr 750m. The Austrians will also be able to give more tax advantages, although the French aid, provided under its new special industrial adaptation fund (FSAI), will be at special cheap rates of interest or direct grants.

But Lorraine can offer Ford a pool of labour, well-developed mechanical skills, and proximity to its factories and suppliers in West Germany.

On the political front, France clearly has some sound cards to play. Ford has not invested heavily in the country as yet (although it has a gearbox plant at Bordeaux), and the company wants to push up its market share in France. In addition, Ford is aiming to pull out of Richier, the French construction equipment group it bought in 1972, and which employs 2,600 workers. The Government can argue, therefore, that France's turn has come round for a considerable investment.

The French willingness to play Ford's game of public auction represents something of a climb-down for the Government. Since the days of General de Gaulle the objective of French policy has been to create a strong, domestically-controlled industry powerful enough to stand up to overseas competitors, particularly from across the Atlantic. Predictably, there is some anxiety at both Renault and Peugeot-Citroen, the two big French companies which at present control all of the car manufacturing, about the expenditure of public funds on one of their strongest rivals.

The immediate problems of Lorraine, however, have pushed these reservations into second place. This bleak north eastern area of France is creating acute problems for the Government's industrial policy and could threaten the survival of the Government itself. If the plan to restructure the steel industry is to survive, with the consequent loss of some 23,000 jobs, alternative employment has to be created from somewhere. A motor industry plant, employing 8,000, and spinning off into a range of component companies, would provide the ideal answer.

The Portuguese Government has similar good reason to woo Ford. A decision to set up a plant at Sines would not only alleviate the financial difficulties troubling the industrial complex there, but would also help decisively in the government's efforts to curb growing unemployment in the surrounding agrarian belt of the Alentejo.

The Portuguese Government is bending backwards to give Ford wide ranging assurances on tax relief as well as on the more delicate subject of labour relations. Portugal's present labour legislation, drawn up as a result of the 1974 revolution, makes it almost impossible to dismiss staff, provides for compensation for dismissed workers and lays down generous holiday and annual bonus payments. The Portuguese Government is believed to be considering a new labour code that would bring Portugal into line with the EEC.

Other incentives will be included in new legislation introducing a system of preferential quotas for the next five years for motor companies contemplating major investments in Portugal.

Ford is putting its money on the European market in the light of studies which foresee a much higher growth rate for car demand on foreign markets than at home over the next few years.

The proposed plant, with a capacity of around 1,000 cars a day (probably a mix of the Taunus and new Erica models), is planned to plug a shortfall in Ford's European capacity which it feels would otherwise develop from around 1983 onwards.

Meanwhile, in the face of all this activity by its arch rival, General Motors—the world's largest car company, which, however, plays second fiddle to Ford on international markets—has not been idle.

GM has been showing renewed interest in international development, with—coincidentally enough—Spain and Austria among the countries in which it is considering investment. In the past few days France has let it be known that it is also talking with GM about a similar car assembly plant in Lorraine.

Whether this represents nothing more than a last minute negotiating ploy to show that Ford, after all, doesn't hold all the cards, or whether GM is really mounting a challenge to Ford over the Lorraine project, is just one of the many intriguing questions waiting for an answer over the next few months.

Toyota to cut production because of fall in exports

Y RICHARD C. HANSON IN TOKYO

OTA MOTOR, the giant of Japanese motor industry, be paring its production a rather sharply over the three or four months com-d with a year ago as exports inue to drop and overseas ntories remain high.

e company has forecast a iction in January-June out-of about 10 per cent from levels to around 1.38m s. The monthly production res could, however, be show-annual declines of up to por cent by May, while ch and April output is ned at 15.4 per cent and per cent respectively below ar ago, according to Nihon ai Shimbun, a leading finan-daily.

oyota would not comment on reported figures but did that, given the record thly production levels hit in the spring last year, the pro-jected decline was in line with their own schedules.

The average monthly produc-tion figure under the present target comes to 230,000 units. Output in March, 1978, was 274,153 units (including knock-down cars which are counted separately this year), followed by 245,297 units in April and the all-time record for a month of 277,351 units in May. Nihon Keizai reported Toyota will produce this year 232,000 units in March, 223,000 units in April and 222,000 in May. During the half-year about 30,000 knock-down units will be produced.

The problem of the decline in exports became evident in the latter months of 1978 as the impact of the appreciation of the Yen on its exports to the huge U.S. market combined with the disruption of exports to Iran and a cutback in purchases of cars in Saudi Arabia. It is speculated in the motor industry that Toyota failed to act quickly enough to hold back shipment to the Saudis, and has high levels of stocks in the U.S.

Nissan Motor, the number two car producer, took steps to hold down shipments to the Middle East much more quickly and conducted a successful U.S. sales campaign in December and in January to get rid of 1978 model stocks. Nissan expects that its production for the year will be up, but only slightly, to 2.38m units.

Toyota, hoping that exports will begin to show some recovery by the latter half of 1979, plans to keep production at the 2.86m units built in 1978 (plus about 70,000 knockdown packages).

Nissan in new Swiss sales drive

BY KENNETH GOODING IN GENEVA

. OCTAV BOTNAR, the man businessman who ame a millionaire building sales of Datsun cars in the , has been drafted in to help h a major shake up in the ss distribution of the anese cars.

he reorganisation is being ried out at the instigation of san Motors, second largest the Japanese car concerns 1 maker of Datsun vehicles.

he Swiss distribution com-y has been taken over by a group of private investors organised by the Swiss Credit Bank which has also taken a shareholding on its own account. Previously the com-pany was owned by a Dutch group.

Since 1972, when Datsun cars achieved 3.3 per cent of the Swiss market and sold 8,500 cars, sales have slipped to 4,500 a year and a market share of under 2.2 per cent. This is "totally inappropriate to our position as one of the world's big four manufacturers," says Nissan.

Mr. Botnar was asked by Nissan to act as consultant to the new Swiss shareholders. Neither he, Datsun UK nor Nis-san have any shareholding in the reorganised Swiss company.

Major executive management changes have been made—the Swiss company is still looking for a new managing director—and Mr. Botnar is concentrating on expanding and improving the Datsun dealership network in Switzerland.

UK urged to invest in services

BY MAURICE SAMUELSON

UTAIN is "obsessed" with e need for investment in anufacturing industry and ould pay more attention to vesting in services, Mr. iichiro Matsuo, president of arubeni, one of Japan's big-st general trading companies, id in London yesterday.

Mr. Matsuo was speaking on e second full day of a visit a 100 strong trade mission to plore ways of boosting UK ports to Japan.

Mr. Matsuo, who is leading e mission, said that Japan self was concentrating on vestment in services and ter-ry industry now that the country had passed the period of its main economic growth.

As he was speaking, other members of the mission, repre-senting 62 companies, were visiting various parts of the country. Besides a group examining investment prospects in the UK, it includes teams specialising in foodstuffs and consumer goods, textiles and clothing, and machinery.

The purpose of the mission is to narrow the UK-Japan trade gap by expanding UK sales to Japan rather than limiting sales in the opposite direction, Mr. Matsuo said.

Last year's "sharp increase" in Japanese imports from the UK had demonstrated that long years of effort by both countries were finally paying off, he said.

Stressing the value of Japanese investment in UK ser-vices, he said that Japanese traders had already contributed to UK exports to third countries.

Japan and the EEC have made some progress in their major round of tariff-cutting talks and the shape of a final pact is beginning to emerge, officials on both sides said in Geneva.

W. Germany may act to curb price of chemicals

By Adrian Dicks in Bonn

THE WEST GERMAN Federal Cartel Office has taken what it sees as preven-tive action against excessive price increases for chemical products in the wake of recent rises in crude oil-derived feedstock costs.

In a letter to Herr Kurt Lanz, a director of Hoechst who is President of the Euro-pean Chemical Federation, the head of the Cartel Office, Herr Wolfgang Kartte, warned that public discussion of price increases in the 20-50 per cent range could be an infringement of the Act against limitations on com-petition.

Repetition of remarks attri-buted to Herr Lanz by press reports could result in heavy fines, Herr Kartte wrote.

A spokesman for Hoechst said that Herr Lanz had been misreported, and that he had not discussed specific price increases.

Hoechst has not so far expressed any view on the price consequences of steep rises in the cost of naphtha and other feedstocks, but German chemical executives are privately talking about average increases closer to 10 per cent than to the much higher figures quoted in a Press conference which Herr Lanz addressed in Brussels 10 days ago.

Herr Kartte's warning was described by a Cartel Office spokesman as a "shot across the bows" of the chemical industry, influenced in part no doubt by price increases already notified by ICI and other European producers.

Taiwan quotas

FOLLOWING a rapid rise in imports, a restriction has been introduced on imports into the EEC of knitted tracksuits from Taiwan.

Annual quotas for the four years 1979 to 1982 have been imposed by the EEC Commis-sion after representations by the UK and other member states.

The UK quotas are: 1979—130,000 pieces, 1980—165,000 pieces, 1981—183,000 pieces, 1982—201,000 pieces.

Quotas for imports of this product into the UK were not included in the arrangements for textiles and clothing im-ports by the EEC Commission.

World shipbuilding orders slump to 13-year low

BY IAN HARGREAVES

THE WORLD shipbuilding order book slumped to its lowest level for over 13 years last quarter as the effects of the four-year-old shipping recession continued.

All of the major shipbuilding countries saw their order books shrink. Meanwhile the industry as a whole was turning out ships during 1978 at almost exactly twice the rate new orders were being received.

The latest returns from Lloyd's Register of Shipping show a total world orderbook of 25.8m gross registered tons at the end of December, com-pared with 36.7m grt a year earlier.

Almost 69 per cent of this order book is due for delivery by the end of 1979, indicating that conditions are going to continue getting tougher for shipyards for at least another 12 months.

Japan retains just over 25 per cent of the industry's orderbook, with 6.5m grt, but second place is taken by Brazil with 2.8m grt. Brazil's shipyards are to a large extent cushioned against the recession by Government-backed ordering programmes.

Behind Japan and Brazil come the following countries, showing their orderbooks at the end of last year and the figure for one year earlier in brackets—U.S.: 2.6m grt (3.6m); France: 1.5m (2m); Poland: 1.4m (1.8m); Spain: 1.3m (1.9m); UK: 1.2m (2.2m); Sweden: 1m (2.1m) and South Korea: 0.7m (1.1m).

In December, 1977, there were 10.3m grt of oil tankers on order, compared with 6.6m grt at the end of 1978 and 10.7m grt of bulk carriers, com-pared with 5.9m grt.

In the general cargo classifi-cation, however, there was a much slower rate of depletion and at 8.3m grt the end-1978 orderbook indicates prolonged overcapacity problems for this sector of the industry.

A large number of orders for bulk carriers and tankers were converted into general cargo ships as owners sought to avoid outright cancellation when the gravity of the recession became clear.

The countries making the largest additions to their fleets in the fourth quarter of 1978 were the U.S. (1.8m grt), Liberia (1.4m grt) and Norway (1.1m grt).

● British Shipbuilders' annual returns, published yesterday, show that the state corporation took orders for only 17 merchant ships of 86,600 grt last year, against completions of 714,000 grt. The orders were valued at £80m, compared with the 1977 order intake of 67 ships totalling 517,000 grt and worth £343m.

Holland's deficit doubles

BY CHARLES BATCHELOR IN AMSTERDAM

HOLLAND'S DEFICIT on foreign trade almost doubled in 1978 following a sharp rise in imports and a decline in natural gas exports. The Dutch trade balance showed a deficit of Fl 6.2bn (£1.5bn) compared with a revised deficit of Fl 3.3bn in 1977, according to provisional figures from the Central Statistics Office.

If unregistered trade with Belgium and Luxembourg is taken into account the overall deficit was even larger, the Economics Ministry said.

Dutch imports rose to Fl 114.4bn (£28.6bn) last year compared with exports of Fl 108.2bn. In 1977 imports were Fl 110.5bn, after a down-ward correction of Fl 1.5bn to allow for a change in the method of recording oil imports, while exports totalled Fl 107.2bn.

Imports increased 6 per cent in volume last year while ex-ports rose only 3 per cent. Partly due to the fall in the value of the dollar, prices of both trade flows fell 2 per cent.

SA urged to use Mozambique line

BY QUENTIN PEEL IN JOHANNESBURG

DR. KOBUS LOUBSER, the general manager of South African Railways, has urged South African exporters to con-sider using the line through Maputo, describing Mozambique Railways as being the most efficient in Black Africa.

He said exports were cur-rently running at 15,000 tonnes a day through Maputo and the ore terminal of Matola, and could be more than doubled in two years to 35,000 tonnes.

There has been some resis-tance from South African ex-porters to using the Mozam-bique route since independence, aggravated by serious delays in handling at Maputo.

SAR officials insist, however, that traffic levels have not declined seriously. Current capa-city on the route is 20,000 tonnes a day, major export items including chrome and ferro-chrome, steel, citrus pro-ducts, asbestos and coal.

British trade with Poland reaches record

By Christopher Bobinski in Warsaw

BRITISH EXPORTS to Poland reached a record £266m last year at a time when Poland is severely limiting hard cur-rency imports.

Figures released by the British Embassy here show that UK exports increased by 33 per cent on 1977 while imports from Poland went up by 19 per cent on the previous year and reached £212m in 1978.

The British export growth is explained by continuing deli-veries of equipment to the Ursus tractor factory and the Wloclawek PVC complex, con-struction of which is being undertaken by British contrac-tors.

The trade figures show that similar large-scale contracts will have to be won in the future if this rate of exports is to be maintained.

Machinery and transport equipment exports rose from £81m in 1977 to £101.4m last year, while metalworking and machinery exports grew from £16m in 1977 to £29.6m last year.

Indonesia buys six Airbuses

By Michael Donne, Aerospace Correspondent

GARUDA, the national airline of Indonesia, has placed a contract with Airbus Industrie for six wide-bodied A-300 airbuses, with an option on six more. The deal, including spares, is worth more than £125m ($250m).

Deliveries of the first Airbuses will be made to Garuda at the end of 1981 and in early 1982. The order makes Garuda one of the biggest buyers of this air-craft.

It brings total orders from 21 customers to 189 aircraft (130 firm and 59 on option), with commitments for at least an-other 60 of the smaller A-310 version, involving in all 249 air-craft.

The engines for the Garuda aircraft have not yet been selected. They could be either General Electric, Pratt and Whitney or Rolls-Royce RB-211 power-plants. Hitherto, the General Electric CF-6-50 series of engines has been adopted for the Airbus by most customers.

Mr. Wiseko Soepono, president of Garuda, said that the money for the deal would come from a European-American banking syndicate, in which French, Ger-man and British institutions would be heavily involved.

The Garuda deal will bring more work to the UK, for British Aerospace makes the wings for all the Airbuses, both the A-300 and now also the smaller A-310.

Last week it was reported from Amsterdam that further substantial orders for the Air-bus are in negotiation, and that by the end of March, the total of firm orders and options for the A-300 would be likely to be over 200.

Low growth in UK invisibles

Financial Times Reporter

NET OVERSEAS earnings of major UK service industries should grow by around 5 to 6 per cent in 1979, according to a survey undertaken by the Committee on Invisible Exports.

The main reasons for the low predicted rise in earnings include a pessimistic view of the real growth in the world economy in 1979 as well as the volume of world trade in ser-vices and growing pressure on margins.

The biggest rise is expected by the civil aviation industry. Earnings from inward tourism are also expected to show a healthy rise.

Amin 'fighting for his life'

BY MICHAEL HOLMAN IN LUSAKA

THE EIGHT - YEAR - OLD dictatorship of Uganda's President Idi Amin is in danger of collapse as Tanzanian troops and Ugandan exiles are reported moving closer to the capital, Kampala, only 80 miles from the disputed town of Masaka.

Reports of mutiny in the Ugandan army, incidents of sabotage in Kampala itself and the apparently growing strength of the guerrilla-backed Save Uganda Movement (SUM) suggest that President Amin is fighting for his life.

However, Radio Uganda reported that President Amin's troops had recaptured the southern town of Masaka. The radio report said there had been *heavy fighting in and around the* town.

Kampala residents said hundreds of refugees were camping in the city's football stadium. Many people did not turn up for work yesterday and tanks were parked at several strategic places in the city, including outside the Post Office.

Radio Uganda also said that a second prong of the invading force was besieging the west Ugandan town of Mbarara, which it said was in flames.

Exiles said they believed troops loyal to President Amin intended to make a stand west of Kampala, where the road passes through swampland.

Although the Tanzanians deny they are trying to overthrow Amin, observers believe it is their intention and cite the fact that *mediation attempts by the* Organisation of African Unity (OAU) are treated with little short of scorn by Tanzania. A recent editorial in the Government-owned Daily News was highly critical of the OAU's failure to condemn Uganda's invasion last November, which led to a two-week occupation of over 700 square miles of northern Tanzania and triggered off the current conflict.

"Under the circumstances," it argued, "Tanzania cannot be expected to lay down its guns, fold up its arms and in the so-called spirit of African brotherhood, meekly nurse her wounds *without taking effective steps to* ensure that we shall never again be the victim of Amin's aggression."

Officials declare that as long as Amin is in power, Tanzanian territorial integrity is threatened, irrespective of any pledges the Ugandan President may give to the OAU. Privately they acknowledge that Tanzanian forces are carrying out forays into Uganda but the bulk of the army, they say, remains on or near the border, allowing Ugandans themselves to do the fighting.

This version is disputed by diplomats who, while welcoming the prospect of the collapse of one of Africa's most brutal dictators, express concern about Tanzania's role. They believe that a substantial part of the *17,000 strong Tanzanian army* is some 40 to 50 miles inside Uganda and has played a vital role in the fight for Masaka and Mbarara.

It is responsible for what amounts to an attempt to overthrow the Ugandan Government, they say, with the help of an unknown number of army mutineers and returning exiles many of whom have been based in Tanzania. Claims of "fierce fighting" are regarded as exaggerated. What is happening, say diplomats, is that the Ugandan army is retreating in disarray after occasional skirmishes.

Since coverage of the war is second hand from Kenya and Dar-es-Salaam, it is not possible *to confirm the Tanzanian role.* But if correct, President Julius Nyerere has committed his army to involvement in the internal affairs of another state, albeit in response to provocation. Such a breach of a fundamental principle of the OAU would matter more if that organisation had shown any willingness to deal with the conflict when it began, or to condemn the excesses of the Amin regime.

Meanwhile, the cost of the war to Tanzania—unofficially put at some $500,000 a day—weighs heavily on one of Africa's poorest states. Though no details are available, officials say that projects not already under way have been halted, and recurrent spending in non-military departments has been trimmed by as much as 25 per cent, and a freeze placed on Government unemployment.

The heavy demand on foreign exchange in the form of fuel, equipment and weapons comes at a time when Tanzania is facing a balance of payments crisis. Stagnant production of exports crops which account for some 70 per cent of foreign exchange earnings and rising import bills have already forced Tanzania into negotiations with the International Monetary Fund for a $150m-$200m credit.

Sasol could meet half Pretoria's oil needs

By Quentin Peel in Johannesburg

SOUTH AFRICA's decision to press ahead with an expansion of its Sasol oil-from-coal production has revived the *question of just what contribution the process can make* to the country's fuel requirements.

The answer cannot be assessed precisely because oil import figures have not been published since 1973, and because the full details of the Sasol process, including the exact quantities of by-products other than fuel, are also secret.

Mr. Chris Heunis, Minister of Economic Affairs, claimed last week that the decision to double the capacity of the Sasol-2 plant currently under construction, meant that the combined Sasol output would provide 47 per cent of petrol and diesel requirements if those were kept to present levels. He also claimed that oil imports since 1973 had been kept to an annual average increase of only 0.8 per cent.

In the face of threats of oil sanctions being invoked by the UN against South Africa, either for its defiance of Rhodesian sanctions, or if it refuses to comply with UN plans for Namibia, or for its internal policies, there may be a natural tendency by Government spokesmen to exaggerate the country's self-sufficiency. However, latest information suggests that Mr. Heunis's estimate could be accurate.

In the first place, there is a divergence between the estimate by the oil industry of last year's oil imports of 320,000 barrels a day, and the estimate by a senior Government official of only 250,000 b/d. If Mr. Heunis is correct in his figure for the rate of increase of overall oil imports, at 0.8 per cent per annum *since 1973, then the official* figure of 305,000 barrels a day imports for 1973 would have risen to more than 317,000 b/d by last year.

The latter figure, however, as well as the industry's 320,000 b/d figure, would include both re-exports (including Rhodesia) and additions to the strategic oil stockpile. Although additional storage facilities are under construction in the Cape, existing capacity is full, with the total stockpile estimated at some 18 months' consumption. Thus *the figure of 250,000 b/d may* be the relevant figure for crude imports devoted exclusively to South Africa's domestic consumption.

Given production by the oil refineries of middle and light distillates at up to 75 per cent of each barrel of crude (and thus excluding heavy bunker fuel), 250,000 b/d would produce 187,000 barrels of fuel. If Sasol is to produce 47 per cent of that, it would mean an output of some 8,000 b/d, which on most technical estimates, would seem feasible.

Reuter reports from Tokyo: Japan's Mitsui industrial group is pulling out more than two thirds of its Japanese workforce of 3,100 from a project to build a $3.25bn petrochemical complex at Bandar Shapur, in Iran.

Mitsui said this did not mean that the project had been cancelled, because work was continuing with the 900 workers who were staying.

AP reports: Four foreign oil-workers who were arrested by supporters of Ayatollah Khomeini, were released yesterday after being questioned by revolutionary authorities in the western city of Ahwaz. The four men included two British, one U.S. and one Irish citizen. The four are expected to fly to Tehran as soon as possible.

Schlesinger warning of fuel rationing by summer

BY DAVID BUCHAN IN WASHINGTON

DR. JAMES SCHLESINGER, the U.S. Energy Secretary, yesterday warned the nation's governors meeting here that compulsory fuel conservation might be necessary this summer, but that petrol rationing did not appear *likely* at the moment.

He spoke shortly before the White House was due to unveil stand-by measures, including a ban on Sunday petrol sales, a ban on outdoor advertising lighting and a lowering of heating thermostats, which it has *sent to Congress for approval.* Either House of Congress has 60 days in which to veto the President's request for stand-by authority to impose these measures if the fuel shortages warrant them.

But Dr. Schlesinger said the U.S. should be careful not to over-react to the loss of Iranian oil exports. "If we over-react, and if Iran were to come back on stream earlier than expected, we would have done damage to our economy unnecessarily."

He told the governors that the administration would try to use its stand-by authority for compulsory conservation measures since petrol rationing was bound to be unpopular. He said it would try to compensate for the shortages through voluntary steps, an increase in the use of alternative fuels such as natural gas and coal, and enforcement of the present 55 mile an hour speed limit. Several states, particularly in *the west,* have already announced they would like to raise that limit.

The oil-price rises announced by several producing countries, most recently by Venezuela and Kuwait, clearly provide an added incentive for the U.S. to use oil more sparingly. The Energy Secretary estimated that these price rises by OPEC members would probably drive the price of petrol up by 10 cents a gallon this year, instead of the 7 cents predicted by the administration at the start of the year.

The Iranian Government has said it will resume oil exports next week, but practical prob*lems mean it may take some* time for the exports to build up to a substantial level again. Dr. Schlesinger held out the gloomy possibility that the shortages in importing countries could continue indefinitely, if the other OPEC producers which are now making up for part of the Iranian shortfall, decided to cut back by the amount that Iran produces.

At present, the U.S. is running short of about 500,000 barrels a day from Iran or about 2.5 per cent of total U.S. oil consumption. But the Energy Secretary said yesterday the shortfall would have to be considerably greater before the administration would contemplate introducing petrol rationing.

Canadian capital spending expected to rise 8.9%

BY VICTOR MACKIE IN OTTAWA

CAPITAL SPENDING in Canada is expected to total C$54.7bn (£22.6bn) in 1979, up by 8.9 per cent from last year, the Government's statistics branch said yesterday.

Mr. Jean Chretien, the Finance Minister, has forecast a 7 to 7.5 per cent increase in consumer prices, indicating that the real growth in capital spending may be less than 2 per cent. The estimate for capital spending is not adjusted to take inflation into account.

Spending on construction is expected to total C$34.82bn, up by 7.9 per cent over last year. Non-residential construction is estimated at C$23.11bn, up by 10.6 per cent, while residential construction is estimated at 3 per cent higher at C$11.72bn.

The other component of capital spending is for buying machinery and equipment, which is expected to total C$19.88bn, up by 10.8 per cent on last year. Capital spending by business is expected to total C$34.85bn, an increase of 11.6 per cent. Social capital—spending by institutions and Government—is estimated at C$8.14bn, up by 7 per cent on last year's figure.

Caracas crude price rise still awaited

By Joe Mann in Caracas

Sr. Valentin Hernández Acosta, Venezuela's Mines and Energy Minister, made a formal announcement yesterday on the expected 15 per cent price rise for residual or heavy fuel oils.

An announcement on crude oil price increases is still awaited. A Caracas newspaper, El Nacional, said yesterday that the Government was considering a $1.20 a barrel increase in crude oil prices.

An official of Petroleos de Venezuela, the state oil company, said yesterday that the increased fuel oil prices "had nothing to do with OPEC resolutions. It is a normal commercial increase, and is still way below spot prices." Fuel oil will go up by about $2 a barrel on March 1.

Fuel oil prices generally vary in winter, and Venezuela last month raised residual prices by $1 a barrel. This increase, however, did not spark comment in the international press. The present increase was caused by strong demand from the U.S. and by the absence of Iranian oil exports.

Venezuela exports about 700,000 barrels a day of heavy fuel oil. However, its stocks of residual oil are now at a low level, and Venezuela will not be able to make large profits with its new prices.

Crude oil production, according to the latest Government figures, is about 2.4m barrels a day, near Venezuela's maximum. About 60 per cent of Venezuela's oil exports goes to the U.S. about 12 per cent to Canada, 10 per cent to Central and South America, and 7 per cent to Europe.

U.S. investments abroad up by 18% last year

BY DAVID LASCELLES IN NEW YORK

U.S. COMPANIES continued to increase their foreign investment last year, mainly in Europe, according to a report published yesterday by the New York Conference Board, the business research organisation.

The number of manufacturing investments rose from 151 in *1977 to 178 in 1978, an increase* of 18 per cent. The board says that in the past two years, 58 per cent of these investments were in Europe, mainly Britain, Ireland and France. About 16 per cent were in Asia (mainly Japan), with smaller proportions in Canada and Latin America. Only 5 per cent were in the Middle East and Africa, reflecting U.S. companies' distrust of volatile regions, the board says.

Much of the investment in Europe was to expand existing facilities, the board notes, although the development of North Sea oil was an added attraction for U.S. oil and petrochemical companies.

The main areas of investment were chemicals, electrical machinery and transport machinery, and two-thirds of the investments were made by companies in Fortune magazine's top 500.

AFL-CIO bid to amend wage plan

BY JOHN WYLES IN NEW YORK

THE American Federation of Labour-Congress of Industrial Organisations (AFL-CIO) is continuing to snap at President Carter's anti-inflation policy by seeking substantial amendments to the Administration's real wage insurance programme.

This is part of a broader *strategy aimed at presenting* labour as the principal advocate of "fairness" in the application of the Government's attempt to curb prices and incomes. A major step in this direction was taken last week, when the AFL-CIO announced that it and some affiliated unions would be bringing court cases to challenge the legality of the Government's threat to withdraw contracts from companies which pay wage increases above the 7 per cent guideline, or raise prices by a greater margin than the policy permits.

AFL-CIO officials have scant regard for the real wage insurance plan which offers tax rebates to compensate workers who have accepted 7 per cent rises. But anxious to avoid appearing excessively negative, the AFL-CIO has now sent proposals to the Congress and the Treasury which would significantly broaden the scope of the proposed legislation.

The AFL-CIO is suggesting that corporations should be taxed on any increase in profit margins above the 6¼ per cent *permitted by the current policy.* The AFL-CIO says that the increased revenue from such a tax could then be used to finance an extension in the coverage of the programme to include workers on the minimum wage, which rose 9.4 per cent on January 1 *to $2.90 an hour,* and employees in companies with less than 50 workers.

Both categories are excluded from the current proposals which are still locked up in the House ways and means committee. Public hearings have already been held but it is not yet clear whether there is sufficient support in the committee to send the legislation to the floor of the House.

With the January consumer price index showing a 10.8 per cent annual rate of increase, the Administration appears to need real wage insurance more than ever. The inflationary trend is clearly damaging the guidelines' prospects and there are reports that the Teamsters union, whose crucial negotiations with the trucking industry resumed yesterday, is pressing for a relaxation of the curbs.

India 'No' to Concorde flights

THE INDIAN government has rejected a British Airways request for permission for regular flights of the Concorde at supersonic speed across the Indian peninsula on its Bahrain-Kuala Lumpur / Singapore sector, K. K. Sharma writes from New Delhi.

Mr. Purushottam Kaushik, the Tourism and Civil Aviation Minister, told parliament yesterday that the rejection was the result of studies made of two trial flights by Concorde during which sonic boom measurements were made and reactions of the public *ascertained.*

However, Concorde is being allowed to fly around the peninsula across Indian air space near the Lakshwadeep Islands in the Indian Ocean, subject to review later.

Sanjay gets two years

Sanjay Gandhi, son of Mrs. Indira Gandhi, the former Prime Minister, was yesterday sentenced to two years' rigorous imprisonment after being convicted in a case involving *conspiracy to steal and destroy* satirical film in which the leading character was based on his personality. His co-accused, Vidya Charan Shukla, who was Minister of Information and Broadcasting at the time, got the same sentence.

Both have been released on bail and given a month to appeal to the High Court.

Bhutto exasperation

For the second day running the judges in Pakistan's Supreme Court yesterday showed visible signs of exasperation with the senior defence counsel for Mr. Zulfikar Ali Bhutto, the condemned former Prime Minister, Chris Sherwell writes from Rawalpindi.

The counsel was laboriously *continuing his arguments for a* review of the court's split judgement earlier this month confirming the death sentence on Mr. Bhutto.

After four full days of hearings, it is still not clear when he will conclude his submissions.

CONFLICT IN INDOCHINA

'Vietnam withdrawal' from town controlling strategic crossroads

BY RICHARD NATIONS IN BANGKOK

THE VIETNAMESE withdrew from the town of Lang Xon yesterday in the face of a Chinese advance, Japanese Foreign Ministry officials said in Tokyo.

Diplomats here could not immediately confirm the report but said that earlier reports showed that three Chinese infantry columns were advancing on Lang Xon from the north and west to join a battle which had been building up for days.

Japanese observers said that the Vietnamese had pulled back *from the provincial capital* "temporarily" and had taken up positions on surrounding high ground, shelling the Chinese advance with artillery.

Lang Xon commands the strategic crossroads between "Friendship Pass," where the Chinese crossed the border in mass on February 17, and national route 1-A—a traditional invasion route running 85 miles south-west to Hanoi.

Analysts here had predicted that the first major engagement in this 11-day war would take place at Lang after the Vietnamese began reinforcing the town with long-range artillery and anti-tank missiles. Hanoi had also been moving up troop concentrations, composed mostly of heavily-armed regional forces, but including some regiments of regulars.

Lang Xon is at the head of one of the main invasion routes leading from rugged border regions to the strategic heartland of the Red River delta cradling the capital, key population centres, irrigation system and Haiphong deepwater port.

The Chinese also threaten the other critical military corridor—the Red River valley—which cuts through the mountains in a straight diagonal south-east from the provincial capital of Lao Kay, 150 miles to Hanoi.

Analysts say that Chinese divisions have been advancing *down both banks of the Red* River 10-12 miles from Lao Kay.

The Vietnamese appear to be avoiding a head-on clash with the slow-moving Chinese force, preferring to harass their advance from the high ground above the river valley.

"At some point the Vietnamese are going to have to throw up a hard line before the Chinese approach the river basin where Hanoi's defence parameter begins," a military analyst here commented.

Diplomats feel the battles at Lang Yon and Lao Kay are critical, but not because the Chinese intend to drive deep into Vietnam. "The Chinese simply want a clear demonstration that they have the capability to seize Vietnam's key terrain when they want, even if they choose to do nothing with it," a military analyst here said.

The possibility of Soviet retaliation, however, is con*sidered here to be an adequate* deterrent to any deep penetration threatening Hanoi. It is widely felt here that the Soviets are more likely to use strategic airstrikes inside Vietnam rather than open a diversion on the Sino-Soviet border.

The Vietnamese also appear to realise that China's proclaimed "limited punitive action" is largely bluff. They cannot afford to give ground to the Chinese advance indefinitely, but they have not committed their best regular forces in strength. So far only a few main force regiments have been brought forward.

Observers view this as not just another Indochina war but a curious new sort of military game in which conventional armies are being thrown against one another for unconventional military objectives.

Army textbook doctrine says the point of war is to destroy the enemy or capture terrain. The Chinese, however, want to *chop up some of Vietnam's elite* military units not because they pose any threat to China, but because they have become the icons in Vietnam's national mythology of military invincibility, which the Chinese find intolerable.

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Fremantle port strike

All shipping movements in Fremantle were halted yesterday as more than 200 maritime workers decided to continue their strike till next Thursday at least, AP-DJ reported from Perth.

Eleven foreign ships due to berth in the harbour were forced to anchor outside and eight others about to sail could not leave port.

Chad tension rises

Despite a week-old cease-fire between the rival forces of President Felix Malloum and Premier Hissen Habre, tension increased sharply in Chad's capital yesterday, with a growing danger that the impoverished African nation may disintegrate amid full-scale civil war. AP reports from N'djamena.

Optimism in India over the long-term growth prospects

BY DAVID HOUSEGO, ASIA CORRESPONDENT, IN NEW DELHI

MR. CHARAN SINGH, the *Janata Party leader recently* taken back into the Cabinet as Deputy Prime Minister and Finance Minister, presents his first budget today amid promising signs that the Indian economy may be moving towards a higher long-term rate of growth.

Against the post-independence trend of an average annual increase in national product of 3.5 per cent, the economy has grown over the past four years at an average of almost 5 per cent.

India is still in the extraordinary position that while *almost* half its population lives near subsistence level because of insufficient work, during the past three years the foreign exchange reserves have climbed to a peak of $7bn, food grain stocks are well above normal requirements and the rate of savings has outpaced the rate of investment.

Western donor nations are now trimming their aid programmes because the Government has been slow to utilise funds.

The main impetus behind the higher overall growth has come from improved agricultural output—accounting for 45 per cent of gross national product (GNP) *—and the sizeable increase in* rural incomes this has brought. The three good harvests since 1974-75 cannot simply be put down to weather. The amount of new land being brought under irrigation each year has almost tripled since the 1970-75 period.

The Janata Government's Five-Year Plan target of a ¾ per cent agricultural growth rate seems within reach. The increase in agricultural output also at last seems to be showing up in increased purchasing power and hence demand for industrial goods. *An* 8 per cent increase *in* industrial output is anticipated for 1978-79.

Outside the cities, the increased purchasing power is concentrated in the more prosperous states such as Punjab and Haryana and among the richer farmers. India has an *increasingly self-confident kulak* class—and a large class of rural poor and landless labourers who are becoming more politically conscious.

The Government is hoping that its many small-scale employment generating schemes will gradually increase incomes among this group. There is little evidence that this is happening on any scale. But *unless it does, increased food* production will only add to the already large food surplus, and agragarian unrest could spread.

The current pick-up in economic activity is further reflected in the 20 per cent rise in imports in 1977-78 over the previous year and in another 21 per cent increase from April-November 1978 compared with the same period in 1977. Much of the increase has been in edible oils and man-made fibres, reflecting a growth of consumer demand, but there have also been significant increases in imports of fertiliser, iron and steel, non-ferrous metals, and to some extent, of capital goods.

Thus although the Government has been slow to utilise foreign aid it is using the foreign exchange reserves to make good domestic shortages in a number of areas.

The reserves are still rising as a result of the continuing inflow of remittances from workers in the Middle East and Britain, but at a slower rate than last year. This is because coupled with the sharp rise in imports, export earnings have flattened out, leaving a substantially larger trade deficit.

The jolt caused by the sharp drop in exports has raised the *possibility of reversion to the* aggressive industrial export assistance programme run by the Government until last April. But the first priority is likely to be on meeting the growing domestic demand for engineering goods.

Another sign of increased *economic activity is the growth* in private sector investment after a long period of virtual stagnation. This is the result of higher levels of capacity utilisation and of an improvement in corporate profits.

On private investment, the Finance Ministry points to a substantial increase in loan sanctions and disbursements by the state development banks, but warns that some of the increase may be due to the rising cost of investment.

Much potential new private sector investment, however, is being held back by the Government's determination to resist an expansion of the large family corporations, by uncertainty over its industrial policy among medium-size companies and by the competitively high rates of return on bank deposits of unit trusts.

Mr. George Fernandes, the Minister for Industry, has been far more pragmatic in encourag*ing new private sector invest*ments where additional capacity is needed than his hostility to the large corporations or his desire to encourage the small-scale sector would suggest.

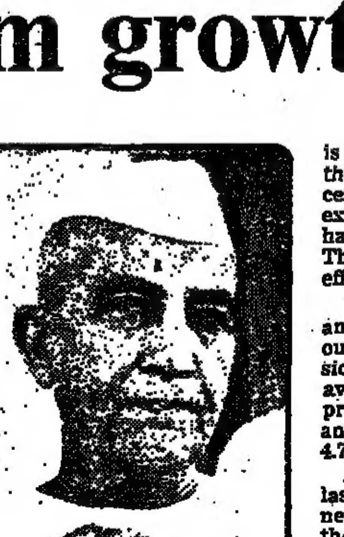
The Government's intention in its new Five-Year Plan is to accelerate the pace of growth through *higher public sector* outlays and greater expenditure in rural areas.

The budget for the current year 1978-79 allowed for a 17 per cent increase in development outlay in real terms, compared with an annual growth of 8 per cent in 1970-74.

For the five years 1978-1983 an average annual increase of 11 per cent is foreseen, involving total plan expenditure of $87bn.

On the Government's calculations, which allow for only a modest use of foreign aid or capital, this is the most India can afford as it involves pushing up the level of savings as a proportion of GDP from 19 per cent to over 23 per cent by the end of the plan.

More to the point, expenditures of such magnitude are probably as much as the country can handle. This year there appears to have been considerable underspending on irrigation and power because of delays in formulating and implementing projects.



Mr. Charan Singh—first budget

In addition, the present plan is the first in which, reflecting *the current emphasis on decentralisation,* over half of total expenditures will be in the hands of State Governments. They have an uneven record of efficiency.

On the basis of a 3-4 per cent annual growth in agricultural output, the Planning Commission foresees a 6-7 per cent average growth in industrial production, giving an overall annual economic growth rate of 4.7 per cent.

After the performance of the last four years, however, planners optimistically believe that the rate may turn out higher.

In these circumstances, the options open to Mr. Charan Singh are limited. In the past he has made clear his dislike of concentrating resources on heavy industry and his determination to shift the balance in favour of the agricultural sector. There is speculation that he might attempt to tax the industrial and urban areas in favour of the rural; but he will find it hard to stamp his indelicate views on the diverse Janata Government.

With the Government's commitment to heavy development outlays, Mr. Singh has little room for cutting expenditure. His main choice will be whether to attempt to cover the anticipated budget deficit out of higher taxes or through further borrowing.

The Reserve Bank has been warning that the cumulative expansion of the money supply over the last three years—it *rose 12 per cent between April,* 1978, and January, 1979—is creating potentially inflationary pressures. Its influence, therefore, has been strongly against further deficit financing and in favour of higher taxation.

But in the Government and the business community there are equally strong fears that further taxation would rein in the long-awaited growth in demand and hold back private investment.

A *further* point in favour of continuing deficit financing is that the wholesale price index is now hardly above last year's level so that the inflationary risk is minimal.

The current buoyancy on the stock exchange suggests that the financial institutions do not believe that there will be any substantial increases in taxation but Mr. Charan Singh is a man who likes to spring surprises.

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UK NEWS

Sky could be limit for Iona's sale price

BY RAY PERMAN, SCOTTISH CORRESPONDENT

IONA, THE Scottish island where St. Columba landed when he brought Christianity and the secret of whisky distilling from Ireland in the 6th century, is to be put up for sale.

There is likely to be considerable interest in the island, which is the latest of several recently on the market. Last year, neighbouring Staffa sold for about £100,000, twice the original asking price, although it is much smaller than Iona and has only a fraction of the historical connections.

The island, three miles long by 1½ miles wide, has belonged to the Dukes of Argyll for 300 years. It is being sold by the trustees of the 10th Duke, a reclusive bachelor who died during the war, to help pay an estimated £500,000 in death duties.

The present Duke of Argyll, the 12th, is the great-nephew of the 10th duke and one of the trustees of his estate.

Smiths Gore, the Edinburgh agents, who will be handling the sale, said yesterday that they hoped to have the island on the market by the end of May. It it too early to say what the asking price would be.

A small part of the Ross of Mull, which was always administered with Iona by the Argyll estate, is also to be sold.

Community

The sale will not include the site of St. Columba's first church nor the graveyard of the Scottish Kings. Both were given by the eighth Duke to the Church of Scotland, which maintains a religious community on the island.

Iona attracts thousands of visitors annually so there is much potential for tourism, but the buyer is unlikely to be able to farm the island himself.

Most of the land is let to crofters, who have security of tenure under the Crofting Acts, and it is possible that they might want to form a consortium to buy the island. A similar scheme is being considered by crofters on the island of Barra, setting for Sir Compton MacKenzie's novel Whisky Galore.

New investment in drive to find inventions

BY DAVID FISHLOCK, SCIENCE EDITOR

A CAMPAIGN to find inventors worth backing is being launched by the National Research Development Corporation, the Government agency for financing innovation. It wants to triple its annual rate of investment of about £6m.

A special publicity campaign, backed by a new sales force, will be seeking ideas worth support. The corporation will emphasise its readiness to provide backing from the laboratory to the marketplace.

The recent Cabinet Office paper by the Advisory Council on Applied Research and Development said that the big risks of innovation lay not in the laboratory stage but in the development phase and preparation for full-scale production. These phases could absorb between 20 and 100 times the cost of research.

Mr. Stephen Dollond, marketing director of NRDC, announcing the campaign yesterday, said the agency was also willing to make "recirculating loans" to companies which, having successfully launched an invention, found themselves short of the cash to fulfill orders.

Another mechanism proposed by Mr. Dollond was that production orders by placed by NRDC itself, in spite of the fact that its sponsoring ministry, the Department of Industry, is underspending on such a scheme. "Wed be willing to consider variations," he said.

In the 30 years of its existence, the agency has built up a portfolio of 329 revenue-earning inventions. Its biggest single source of income, more than £50m, is the cephalosporin family of drugs. Cash flow is only now reaching a peak, more than 30 years after the discovery.

Of eight main sub-divisions for NRDC's patents, the smallest is production machinery, an area of innovation that the Cabinet Office report emphasised was being neglected in Britain.

The agency is financing is backing for innovators out of income from patents. Its aim, Mr. Dollond says, is to break even on the operations of licencing inventions at home and abroad — and financing innovation. "Profit-making but not profit-maximising—if it were we would probably turn down two-thirds of the projects we accept."

He said part of the current £250,000 advertising campaign was aimed at dispelling such myths as the agency's unwillingness to finance an invention through to commercial success. Another was that it entered into ventures only with big companies. More than half NRDC's projects were in partnership with companies employing less than 200 people.

IN BRIEF

Employment protection back with Lloyd's

Employment Protection Insurance Services, a small specialist firm providing employment protection consultancy services, has returned to the Lloyd's market in placing its insurance requirements.

A new insurance scheme has been arranged by the company's Lloyd's brokers, Wigham Poland, using two insurers—one at Lloyd's involving about six syndicates, and the other in the company market with three insurance companies.

EPIS announced last November that it was withdrawing drawing from the Lloyd's market in placing insurance requirements because the underwriting arrangements had been found to be unsatisfactory and would rely on the company market. The syndicate involved at Lloyd's stated that the insurance arrangement had been cancelled because of the serious losses incurred.

Good for you

A further attempt to reassure drinkers of Guinness and other stouts that the new Weights and Measures Bill will not mean the end of the head, or froth, was made by Mr. John Fraser, Prices Minister, yesterday.

Shipowner

Mr. Brian Shaw, 45, chief executive of Furness Withy, has been appointed chairman of the Council of European and Japanese National Shipowners Associations.

The council, which represents 11 countries controlling 55 per cent of the world fleet, seeks to influence U.S. marine policy away from anti-trust postures which have led to a number of *clashes in recent years.*

Doctor care

Special financial incentives to encourage more family doctors to work in problem areas are recommended by the National Consumer Council in a research paper published by the Royal Commission on the National Health Service.

Home care

Recent rapid growth in home improvement could be jeopardised unless finacial resources are made available to householders "on sensible terms," says Mr. George Pluckett, chairman of the National Home Improvement Council, in its annual report.

Job threat

A further attempt is to be made today to finda way to save 500 jobs threatened at Peter Pan Bakeries in Ulster. The Government would like any further cash aid linked to a plan for long-term viability.

Sewn up

Mitsui has bought the Japanese manufacturing rights of a machine developed by Courtaulds which makes it easier and cheaper to shape knitted fashion goods. It reduces from 30 to 3 per cent the amount of fibre lost in shaping garments.

Electrify

Britain should electrify its main railway lines because by the year 2000 diesel oil power could be two or three times as costly as electric power, Sir Peter Parker, British Rail chairman, said yesterday.

Civil Service switch opposed by unions

BY PAUL TAYLOR

A GOVERNMENT plan to recruit experienced industrialists to top Civil Service posts has met total opposition from the Civil Service unions and now threatens the whole system of temporary job transfers with industry.

Plans to recruit up to nine industrialists "with extensive and relevant industrial experience" to under secretary posts directly were in a letter to union chiefs from Mr. Noel Moore, Civil Service Department under secretary.

The letter linked the scheme directly to the English Committees proposals that there should be more interchange between the Civil Service and industry. However, the Civil Service Department yesterday said unlike the existing transfer scheme, Mr. Moore's proposals involved permanent recruitment into the service.

The unions, under pressure, now allow direct recruitment up to principal level and co-operate with the existing transfer scheme.

However, Mr. Bill Kendall, secretary general of the Staff Side of the National Whitley Council, speaking for the Civil Service unions, has described the suggestion as "amazing."

In a letter of reply, Mr. Kendall said the unions were "totally and irrevocably opposed to any form of direct recruitment above normal entry levels" and given the "cavalier manner" in which the proposal ignored the possibility of internal recruitment.

Mr. Kendall said that experience of direct recruitment at lower levels into the service had failed to attract "people with relevant industrial and commercial experience" because of low pay.

He described the linking of the proposal to existing interchange arrangements as "purely a cosmetic exercise designed to placate the expenditure general sub-committee" and warned that unless the proposal was withdrawn, discussions on the extension of interchange arrangements would be halted.

Such a move would be a severe blow to the Government's plans to promote an exchange of experience between civil servants and industry.

It is thought that the Civil Service Department has replied to the unions' criticisms of the proposals although no official details of that reply have been made public.

Redundancies likely under London docks' plan

BY IAN HARGREAVES, SHIPPING CORRESPONDENT

BETWEEN 860 and 1,460 dock workers would lose their jobs under the terms of the Port of London Authority's five-year corporate plan, to be discussed for the first time with trade unions today.

These redundancies would be in addition to the 1,500 agreed between the authority and unions last year under the terms of a short-term plan. So far, fewer than 500 men have accepted the terms.

The plan, as expected, returns to the theme of dock closures. In presenting a series of possible future financial trends, it shows that on the basis of what the board feels to be realistic trade targets, only the closure of one up-river dock will put the port back into the black.

The PLA lost £8m in 1977 and will shortly report a loss of £17m for 1978, before offsetting Government grants of £4m. Its proposal last year to close the Royal group of docks was vetoed by Government.

Taking the base trade forecasts, the plan shows a net profit of £3.4m in 1983 with only one of the two upper docks operating, compared with a loss of £2.9m if both are retained. Even with the closure of a single dock, the plan says the authority would be £4m a year short of the level of cash flow needed to develop the business.

Although the case for a dock closure is implicitly put in these figures, the discussion document to explain the plan is much more gentle than the first paper published last May when the closure issue was first raised.

The softer tone reflects both a desire to offer trade unions the maximum opportunity to influence planning and the shadow of Government, which has shown itself unwilling to risk a confrontation over the PLA.

Mr. John Presland, managing director of the PLA, said yesterday that he expected consultation on the plan to be complete by the end of May, when it would be up to Government to make a decision. He hoped the uncertainty about the port's future would not be prolonged much beyond that date.

It is partly this uncertainty which has led to a continued deterioration in the port's trading prospects in the past year.

In the nine months to September, London's share of UK general cargo fell by 10 per cent compared with a year earlier. Throughput of general cargo handled by conventional means, mainly at the Upper Docks, fell by 17.8 per cent.

The plan has, accordingly, reduced its forecasts of future trade levels by 20 per cent to 30 per cent on the figures thought realistic a year ago.

This means a further loss of jobs, which the "base" plan puts at 860 if both upper docks are retained and 1,460 if one is closed. It is estimated that by 1983, the upper docks will be losing £9.6m if no facilities are closed.

The container port of Tilbury, where the PLA would like to concentrate its activities, also made a £2m net loss last year, but is expected to move into a £2m net profit by the end of the planning period.

Today's discussion paper warns that if the workforce does not back a plan leading towards financial viability, Government support could be withdrawn, resulting in receivership and the possible immediate closure of both upper docks.

Government support, announced last August, involves grants of £35m to cover staff severance costs and backing for a £10m loan to cover other needs.

London taxi fares likely to increase by 12%

BY COLLEEN TOOMEY

LONDON taxi fares are likely to increase by 12 per cent in the next two months if agreement is reached today between the Home Office and the Licensed Taxi Drivers' Association, which represents London's 17,000 cab drivers.

The Home Office's 12 per cent offer was rejected by cabmen last December after an application by the Licensed Taxi Drivers' Association in July for a 29 per cent increase. The Home Office agreed to an interim rise of 10p on the initial charge pending further negotiation.

The offer now includes a cut in the initial hiring charge by 5p to 40p and an improved mileage rate to bring back *profits on long journeys.*

The LTDA said yesterday that drivers are earning an average 24p a mile compared with 32p a mile offered by the Home Office. In an LTDA report for the Home Office, however, it was argued that a 50p a mile tariff was more realistic.

Night and weekend charges of 10 pence are also likely to go up to 20 pence.

Many drivers have to work up to 65 hours a week to make up losses and some break the law by refusing uneconomic journeys to areas such as Crystal Palace or Denmark Hill.

Mr. Harry Feigen, LTDA general secretary said yesterday that the majority of drivers would accept the terms because of the Government's stance over other pay claims.

Mr. Feigen said that if an agreement is reached it will be back-dated to December to pave the way for new terms to be negotiated this Christmas.

In the long-term, the cabmen want a costs-linked index keeping fares in line with fuel and cab maintenance. The LTDA and the Home Office will begin work on the index later this year.

Suspended prison terms for two stockbrokers

BY CHRISTINE MOIR

TWO FORMER member of the collapsed stockbrokers Chapman and Rowe, Mr. Alan Harman and Mr. John Michael Goodsell, have been found guilty of conspiracy to refraud clients and given suspended prison sentences.

Chapman and Rowe was "hammered" on the Stock Exchange in 1974 when the firm was discovered to have a deficiency of nearly £2m.

Subsequently six partners were charged with using pledged clients' shares without authority as security for bank loans for the firm.

Four were acquitted after a three-month trial early in 1978, but the jury was unable to reach a verdict with regard to Mr. Harman, a former partner, and Mr. Goodsell, the general manager. A re-trial began early this month.

The court was told that in 1973 Chapman and Rowe had bank borrowings of £2.3m against which parcels of shares were pledged as securities.

The stock market was rapidly falling and with it the value of the securities. It was alleged that to maintain the value of their collateral, Mr. Harman and Mr. Goodsell pledged shares belonging to both personal and institutional clients to a variety of banks. This had been done without the clients' authorisation.

These practices came to light during the financial examination of Chapman and Rowe's affairs demanded by the Stock Exchange in 1974. The City of London Fraud Squad was then called in and further investigations were carried out by Detective Chief Inspector John Todd.

Mr. Harman was sentenced to 18 months' and Mr. Godsell to one year's imprisonment, both terms suspended for two years because, Mr. Justice Leonard said, the case had taken so long and the men had had to undergo two separate trials. Mr. Goodsell was also required to pay £1,000 towards prosecution costs.

Silver bank loses court action

THE OFFICIAL Receiver's appointment as provisional liquidator of the London silver bank Kendal and Dent is to continue, pending the hearing of the Department of Trade's petition to wind up the company, a High Court judge ruled yesterday.

Mr. Justice Vinelott dismissed an application by the company to discharge the provisional liquidator, who was appointed during an *ex parte* hearing on December 18, the day the petition was presented by the Secretary of State.

Kendal and Dent was given leave to appeal.

The company, which is in the hands of a special manager, Mr. Ian Watt, appointed by the provisional liquidator, had offered a number of safeguards if it was allowed to resume limited trading.

There was also an offer by a number of creditors to leave £1.5m deposits in the company as working capital.

But the Judge said: "Having regard to the small margin of its net assets over liabilities (assuming that £1.5m of its deposits are subordinated to the claims of all other creditors) and to the continuing liabilities of the company in maintaining its offices and staff, and for engrossment and possibly tax on engrossment, the small advantage to the company of the limited form of trading envisaged does not justify the order the company seeks."

Mr. Anthony Lincoln, QC, for the company, had submitted that, as it had had no opportunity to answer the Secretary of State's evidence and many of the allegations on which the application for a liquidator was based had since been shown to be unfounded.

The arrangements since Mr. Watt had been appointed special manager had worked well and it was admitted there would be no real advantage to the company in discharging the provisional liquidator unless other orders were made enabling the company to resume trading.

The petition against Kendal and Dent alleges insolvency, and breaches of the Companies Act, Protection of Depositors Act and Exchange Control Regulations.

The company is strenuously opposing the petition.

Division on strategy

By Hazel Duffy, Industrial Correspondent

THE NATIONAL Economic Development office's fluid power equipment sector working party is divided over the Government's industrial strategy.

Its report, published today, discloses that the pneumatic equipment and compressor sides of the industry want a fundamental change in the group's activities. They have proposed priorities for implementing the industrial strategy. These include policies to make investment in manufacturing industry more attractive. The working party has agreed to consider the proposals in detail.

British Airways hopes to offer more cheap fares

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

BRITISH AIRWAYS hopes to be able to offer more cheap Advanced Purchase Excursion (Apex) fares on some domestic air routes, in spite of its plea to raise normal rates on the trunk routes between London, Glasgow, Edinburgh and elsewhere between 6 and 7½ per cent.

The airline told the Civil Aviation Authority in London yesterday that while it wanted to increase normal fares to improve the profits on domestic routes in 1979-80, it still was prepared to extend Apex cheap fares in off-peak periods.

BA said that in 1977-78, it lost £8.3m on domestic routes because of the air traffic control assistants' dispute and difficulties arising from the discovery of wingcracks in the Trident fleet.

In 1978-79, an operating surplus of £4.95m was forecast, but after all deductions this would yield a net profit of only £44,000 which, on revenue of £135.8m, would be "patently inadequate."

If its application for fare rises were to be approved, the airline would expect a surplus in 1979-80 of £6.7m, but after all deductions this would still not yield an adequate profit.

The airline said that assuming there were no unforeseen cost increases, it would not ask for any further domestic fare increases before April 1 next year. The rise now sought is likely to be below the increase in the retail price index for the coming year.

BA also pointed out that it offers fares below the normal economy level on its domestic services.

In the past year, a variety of low fares had been introduced, each designed to save the passenger a substantial sum while avoiding increases in costs which would render the low fares uneconomic.

While the conditions attaching to those fares varied, in general they were designed to fill more off-peak seats or those unsold close to time of departure.

The airline was seeking permission from the authority to apply this kind of cheap fare more flexibly, but even so most of its domestic services revenue still had to come from passengers paying higher normal fares.

Inflation speeds up in hosiery industry

BY JAMES McDONALD

INFLATION is accelerating in the hosiery industry because of high wage settlements and big increases in world commodity prices, Mr. Peter Bailey, president of the Leicester and District Hosiery Manufacturers' Association, said in Leicester yesterday.

"In a labour-intensive industry the longer term effects of this will be significant. Unless inflation can be controlled our costs will rise significantly and will have to be matched by increased prices." Mr. Bailey said at the association's annual meeting.

He believed the industry contained the skill to hold on to the better end of the hosiery markets.

"However, there is no doubt that certain further parts of our markets will be lost to us." This would inevitably cost jobs and cause further casualties among members.

Britain, said Mr. Bailey, was suffering from an overdose of collectivism and "corporate stateism," with corresponding effects on the hosiery industry —"which is essentially entrepreneurial, consisting as it does of many hundreds of companies

Industry did not need, did not deserve and could not afford constant and unjustified criticism, unnecessary intervention and additional burdens.

"We cannot afford constant disruption by strikes and stoppages which affect supplies to and deliveries from our factories.

'Nuclear energy survival'

NUCLEAR ENERGY manufacture was a business "no one in his right mind should enter" yet it was clear that it would be needed to protect the world from economic and social devastation, a senior Shell executive said in London yesterday.

Technically, the industry had been a great success and was already producing the equivalent of some 6 per cent of the free world's oil consumption, said Mr. John Minzinga, chief executive of General Atomic, the joint nuclear venture between Shell and Gulf Oil.

Mr. Minzinga, a Dutch oil industry executive with a reputation for trouble-shooting, was seconded to the nuclear venture by Shell when it recognised that its losses in the joint venture were heading for £300m.

The U.S. electricity supply industry already had more nuclear capacity than its total electrical capacity at the end of World War Two, he said at a conference on world energy economics.

U.S. utilities were spending $11bn a year, and the French, $3bn a year, on nuclear power stations.

The size of existing contracts was bound to exercise a stabilising influence on the industry. But for the future it could prove a deterrent, he said. During the last four years cancellations and deferrals had "far outnumbered" new orders.

Delay of new orders inevitably favoured prospects for fossil-fuelled plants because they were taking between two and six years less to complete.

It was typical of the technology-dominated outlook of the industry that it had been caught by surprise by advocates of a simpler life. It had failed to perceive the strength of deeply-rooted instincts for survival and security, stimulated by fear of the unknown, on which its opponents had been trading.

People did not reach positions of eminence in the nuclear industry for qualities which endeared them to the media. But leading spokesmen for the anti-nuclear movement had emerged because of their ability to attract public attention.

"They have never had to build anything but their own reputation. None of their statements can ever be put to the test, while every mistake in nuclear construction will be there to haunt the industry, as long as there are doomsayers in need of an audience."

Tories expect local poll losses

BY PAUL TAYLOR

CONSERVATIVE local Government strategists believe the party will lose control of between 20 and 30 district councils in the forthcoming district council elections. However, even such losses would not greatly detract from the party's achievement at local Government level because of its outstanding successes in the past local elections in 1976.

The degree to which the expected loss of 200 or 300 council seats will affect public opinion in the run-up to a General Election will probably depend on the extent to which the Conservatives can explain the losses.

All seats in all but 44 of the 333 non-Metropolitan districts are up for re-election on May 3, together with a third of those in the 44 non-metropolitan and the 36 metropolitan districts.

However the Conservatives' success will probably depend primarily on the relative strength of the party in May nationally compared with the metropolitan elections of 1975 and the non-metropolitan elections of 1976. Both were strong years for the Conservatives and in spite of the party's current strength in the opinion polls there is likely to be a 2 or 3 per cent swing to Labour at local level.

Vulnerable

Most vulnerable Conservative councils are in the Midlands and North-west England. Tory statisticians continue to assume that the national swing to the Conservatives since the last general election will be magnified at local level because of the usual low turnout and that national rather than local policies, including rate rises, will decide the results.

Conservatives control 17 of the 36 metropolitan and 180 of the 333 non-metropolitan districts in England and Wales. Boundary changes in some areas will make analysis of the results difficult.

The possible effect of large rate increases — expected to average 18 per cent this year in the districts—remains unknown. They arise in part because of changes in the distribution of government grants to favour urban and metropolitan areas, in part because of government plans to hand back certain powers to the larger districts.

The Conservative Party sees the chief prizes as lying mainly in the north and west and the larger non-metropolitan areas; but the main contests will occur in places where the party has no overall control. In such areas the performance of Liberals and Independents will probably be critical.

There are no elections in London this year.

£18,000 Galle table lamp is art nouveau highlight

SALEROOM

BY ANTONY THORNCROFT

THE REMARKABLE price of £18,000, plus a 10 per cent buyer's premium, was paid at Christie's yesterday for a Gallé mould-blown cameo table lamp. It had cost £300 originally in 1900 and was the highlight in an art nouveau sale which totalled £58,160.

Studio pottery was also in demand. Tempus Antiques paid £1,200 for a St. Ives stoneware "Pilgrim" plate by Bernard Leach and £1,100 for a Martin-ware tobacco jar and cover modelled as a grotesque bird.

Also at Christie's, topographical and decorative prints totalled £120,534. There were two records: the £5,500 paid by Richard Green for a pair of still lifes of flowers and fruit by J. G. Laminit, after Johann Daniel Bager, was a record for a coloured mezzotint; and the £7,500 from Hazlett Gooden and Fox for 30 plates by Samuel Daniell of African scenery and animals was a record for the artist. Coins made £73,475 with a best of £4,000 for a Japanese Manen Iban of 1860.

A 30-piece collection of Meissen porcelain made £10,500 yesterday in a Sotheby's sale of continental pottery and procelain which totalled £180,020. A rare Hafner-ware tankard of the late 16th century, but with some restoration, made £9,400 and George Gardner, a Canadian buyer, paid £8,500 for an Urbino "Istoriato" charger. A Hispano Moresque albarello of around 1500 made £8,000. A pair of Dutch Delft parrots of the mid-18th century was bought for £7,000.

Consultants see taxes as main export barrier

BRITISH consultants believe that the biggest constraint on financing the growth of their overseas business is the rate of UK taxation, according to a survey published today.

The British Consultants' Bureau, which conducted the study of consulting engineers, architects and management consultants, reports that half the companies questioned put personal and partnership or company tax as the single most important factor inhibiting growth of their overseas business.

The study says the consultants believe taxation rates are effectively preventing the accumulation of capital for financing their activities.

But overall the reason most frequently cited for the limitation of overseas growth was the strength of competition.

Car link with telephone network gains licence

AIRCALL, the largest UK private radio telephone operator, has obtained the first Post Office licence to allow calls from commercial car telephones to be connected to the public network.

Previously only Post Office radio telephones could make direct calls. Private operators could only pass on messages indirectly from their mobile callers.

Aircall has ordered £1.4m worth of equipment from Marconi Communications to modify its 22 control centres in Britain. Aircall will introduce the service in the next few months in Aberdeen, Nottingham, Norwich and London, and expects to cover the country by the end of the year.

Aircall is the largest of about six commercial car telephone services. It has between 4,000 and 5,000 sets installed in customers' cars compared with about 4,000 sets in the Post Office's radio telephone service.

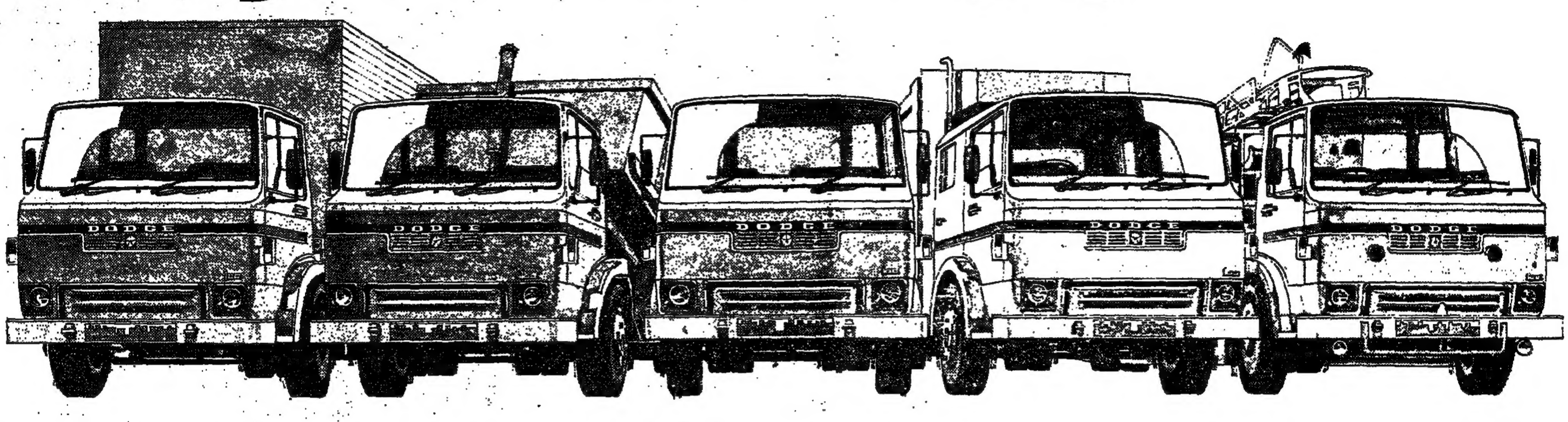
Other commercial operators may now follow Aircall's lead and apply for similar licences. They will not, however, be allowed to connect calls through the public network between two mobile telephones.

Road accident injuries study

A TEAM from Oxford University and the Transport and Road Research Laboratory has started a three-year study into road accident injuries.

The Oxford group will advise the laboratory on human and mechanical tolerance in road accidents. The teams will also investigate improved car design to reduce the severity of injuries.

Call up the Dodge Commandos. Any time. Any place.



Whatever business you're in, whatever service you have to provide, you must have reliable, cost-effective transport.

A Dodge Commando truck will give you precisely that.

It can actually help cut distribution costs and achieve more efficient delivery operations.

How?

We're not going to back that claim with a long, tedious argument that quotes computerised figures with three decimal places, just to identify the odd penny you might save here and there.

Because we're offering you the opportunity to discover for yourself just how good the Commandos are.

An open invitation to all companies that have never bought a Dodge Commando.

You may well be reasonably pleased with the vehicles you're running now. Or perhaps not.

But in any event, shouldn't you at least give yourself the chance to prove once and for all that you're as happy as you think you are?

Call up the Dodge dealer near you. Ask for a Commando demonstrator. For a couple of hours, or a couple of days. A week, even.

And if a week is not enough, say so.

Take the truck away. Try it out on your toughest route.

We promise there will be no obligations on your behalf. Except to return the truck.

And there will be no hard sell from us. Except that, when asked, we will quote a very competitive price. And we also reserve the right to tempt you further with extra-fast delivery.

But the vehicle's appraisal, we'll leave to you. And to your drivers.

However, just in case you'd like some real evidence that Dodge Commandos can cut your transport costs–before you spend a few pence phoning the Dodge dealer–read on.

National fleet operators are calling up more and more Dodge Commandos. Ask them why...

Ask Carlsberg. "It's reliability and economy that are most important to us. Our vehicles clock up a big mileage and the routes covered combine long, fast runs with constant stopping and starting in delivery areas. In our experience, the Dodge Commando G16 is the best truck for the job."

Ask Debenham's. "Since the introduction of Dodge Commandos, our operating costs have reduced considerably. Their excellent reliability record is confirmed by the fact that time off road has been reduced beyond all reasonable anticipation."

Ask National Carriers. "We've had experience with all British tractors of around 18 to 20 tonnes GCW. And currently, the Dodge tractors satisfy our needs in terms of specification and reliability better than all the others."

Ask Arrowfast Express, Robirch, Watney Mann, Scot Bowyers, Walls Ice Cream, London Co-op, Weetabix. Ask anyone.

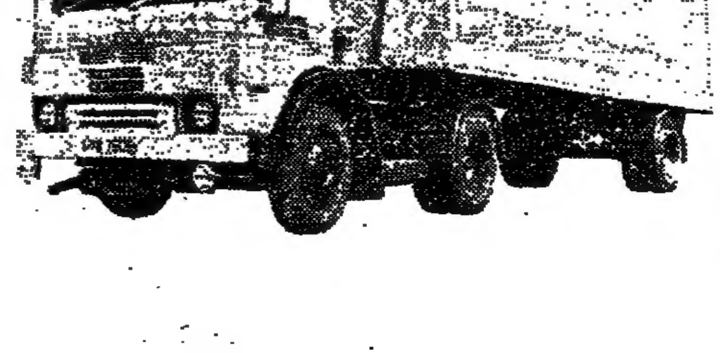
Call up a Dodge Commando. Call one up now.

Dodge Commandos cover the entire weight range from non-HGV 7½ tonnes GVW through to 20 tonnes GCW.

All the rigids offer a wide choice of engines, drivelines, wheelbases and bodies. So you can specify a Commando that delivers the right balance of performance and economy for your operation.

Contact your Dodge dealer. Tell him you want proof that the Dodge Commando is a better truck than the one you're using now.

He's ready and waiting.



DODGE COMMANDO RANGE

G08
4x2 rigid, 7.38 tons GVW
Choice of two engines, four or five speed gearbox, single or two speed axle, three wheelbases.

G09
4x2 rigid, 8.5 tons GVW
Choice of three engines, four or five speed gearbox, single or two speed axle, three wheelbases.

G10
4x2 rigid, 9.7 tons GVW
Choice of two engines, four or five speed gearbox, single or two speed axle, four wheelbases.

G11
4x2 rigid, 11.2 tons GVW
Choice of four engines, four, five or six speed gearbox, single or two speed axle, five wheelbases.

G12
4x2 rigid, 12.0 tons GVW
Choice of four engines, five or six speed gearbox, single or two speed axle, five wheelbases.

G13
4x2 rigid, 13.0 tons GVW
Choice of four engines, five or six speed gearbox, single or two speed axle, five wheelbases.

G15
4x2 rigid, 14.5 tons GVW
Choice of four engines, five or six speed gearbox, single or two speed axle, five wheelbases.

G16
4x2 rigid, 16.0 tons GVW
Choice of four engines, five or six speed gearbox, single or two speed axle, five wheelbases.

G18
4x2 tractor, 18.0 tons GCW
Six cylinder in-line turbocharged diesel, five speed gearbox with single or two speed rear axle.

G20
4x2 tractor, 19.68 tons GCW
Six cylinder in-line turbocharged diesel, five speed gearbox with single or two speed rear axle.

Your Dodge dealer will advise you on availability of different engine and gearbox combinations for each model.

Demonstrators are on offer subject to availability. Consult your dealer for full details about all conditions relating to the use of Dodge demonstration vehicles.

Dodge Trucks

DODGE COMMANDO

CHRYSLER UNITED KINGDOM

Belfast port £20m scheme to start

BY LYNTON McLAIN

THE PORT of Belfast is to go ahead with a £20m investment programme in the next five years.

The £13m first phase involves building a roll-on, roll-off berth, a lift-on, lift-off berth, and a deep-water multipurpose berth. The programme includes installation of two cranes of 15 tonnes capacity at an existing berth.

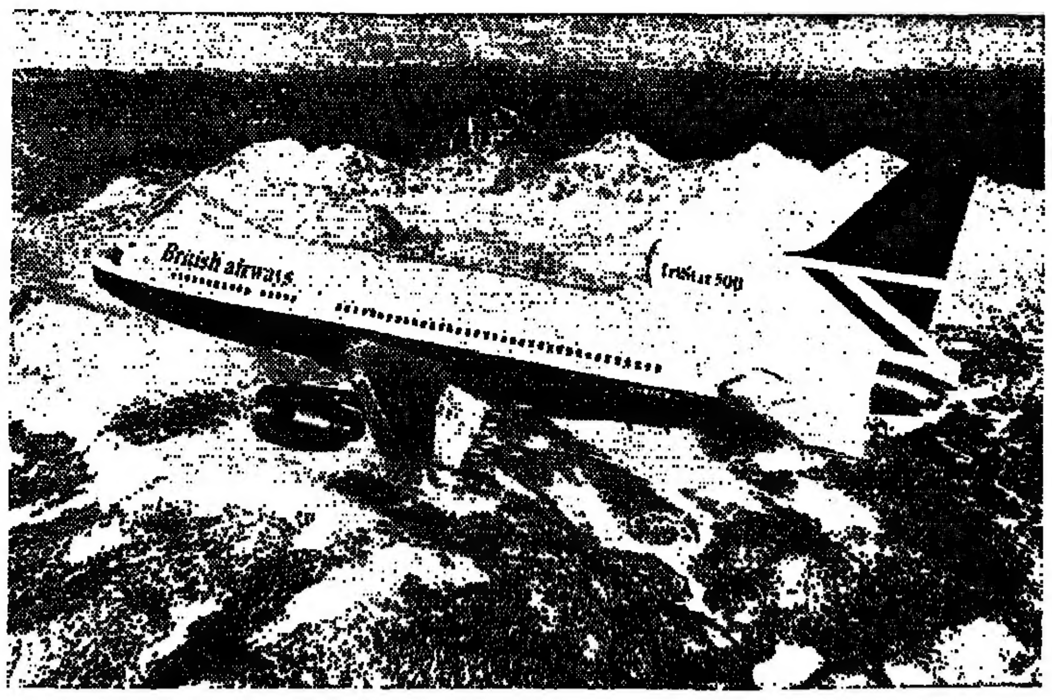
Consultants have been appointed to carry out design work for the schemes. Both sites will be linked directly with the M1/M2 motorway. Work on the link road has started.

The initial investment programme was disclosed at the annual meeting of the Belfast Harbour Commissioners yesterday. Mr. W. Barnett, chairman, also announced plans for further investment of £7m over five years.

It would involve facilities for exporters and shipowners, and talks with users are continuing.

The port plans to withdraw from service several berths which no longer meet the needs of shippers, but they will be phased out only when the new facilities are operational.

The Harbour Commissioners reported an operating surplus of a little more than £1m last year, a rise of £63,000 over 1977. The net surplus for last year was £753,000, compared with £780,000. Total revenue was £4.085m, £1.6m more than the previous year.



The Dash 500, latest version of the Lockheed Tri-Star tri-jet, flying over the Sierra Nevada mountains 200 miles north of Los Angeles. British Airways will take delivery in April of the first of its order for six of this long-range version, capable of exceeding 6,000 miles non-stop with a full loa dof 246 passengers. The sixe will bring to 5 the airline's fleet of Tri-Stars of all versions, with another six on option. The Dash 500 will be used to open new long-range routes as well as taking over from VC-10, 707s and earlier model Tri-Stars on such routes as London to Jeddah, Dhahran, Baghdad and Abu Dhabi.

Control of building society deposits aired by bankers

BY NICHOLAS COLCHESTER

THE QUESTION whether the Bank of England should extend its monetary controls to include building society deposits is aired in oral evidence given by the Building Societies Association, and by the Committee of London Clearing Bankers, to the Wilson Committee. The third volume of the committee's "second stage" evidence is published today.

Lord Armstrong, chairman of Midland Bank, told the committee: "If the Government wishes to control the money supply, as they do at present, they may increasingly come to feel that controlling only notes and coin and bank deposits is *not actually adequate. That may* lead them on to thinking that they should control building society deposits among other things."

In written evidence the big London banks had complained that the building societies benefited from fiscal and regulatory advantages not available to banks.

Asked whether the societies would mind if their tax advantage was made available to competitors, Mr. Ralph Stow, chairman of the Cheltenham and Gloucester, said that they would have no objection and were confident they could remain fully competitive.

Mr. Stow also said that his *Association had been having* talks with the Bank of England and with the Treasury about monetary controls and their possible extension to building societies. "If there is a way in which we ought to be slotted in to the total monetary control, we hope to find the right answer," he said.

On the central question of the provision of funds for British industry, the banks told the committee that there was room in their balance sheets for a further expansion of activity in medium-term and long-term lending. There was no immediate need for a refinance facility with the Bank of England to support this development, they said, though it might provide "quite a useful backstop."

Mr. Stuart Graham, chief general manager of Midland Bank, talked of a continuing development of the business of the big banks towards the provision of long-term and equity finance, accompanied by a *growing role for industrial* specialists on bank staffs.

The building societies said that they would "like to explore the possibility" of lending more of their surplus funds to industry—something which they are presently not allowed to do.

Finance for Industry, the company which controls ICFC, "might be a line in which one could direct money in certain circumstances." They said they would like to take this up with the Registrar, and, through him with the Treasury.

The bankers would not be drawn on whether they thought the relationship between the Government and the Bank of England was the right one.

They urged that the Bank of England adopted a senior clearing banker as a non-executive director.

Cumbernauld expansion

By Ray Perman, Scottish Correspondent

A £2 PLANT which will employ 400 people is to be built in Cumbernauld new town, near Glasgow, by J.L.G. Industries (UK), to make hydraulically-operated platforms.

The U.S.-owned company has had a small factory in the town for 18 months, but is expanding to meet demand from Europe and the Middle East.

Advice to help small companies expand

FINANCIAL TIMES REPORTER

THE NATIONAL Enterprise Board in the North-west has linked with a Manchester business consultancy in an experimental scheme to help small companies with big growth potential.

Under the project, which could lead to the establishment of a wider scheme, the NEB and Collinson Grant Associates have formed Sapling Enterprise to guide and advise small companies on how to achieve rapid growth.

Support will be limited to 10 companies in the North-west for the four-year experiment. The NEB will make at least £50,000 available to each. The first two have been chosen and Mr. Arthur Ward, NEB North-west regional director, said in Manchester yesterday that it was hoped to select eight more, reflecting a range of industry, over the next three to four months.

The NEB intends to defer any rights to profit participation during the experiment, but companies will pay Sapling for services, including assistance in drawing up an annual "action programme" of organisational needs and development plans.

Sapling will also have a limited share in profits during the four years.

The first two companies selected are Rigby Electronics, a specialised electronics company founded seven years ago by Mr. Brian Rigby, its present managing director, of Swinton, Greater Manchester. It has an annual turnover of £450,000 and employs 40 people in the production of electro-high vacuum equipment, control equipment, and infra-red machine guards.

Shareholding

The NEB has agreed in principle to invest £150,000. It will take the form of £75,000 redeemable preference shares, including £10,000 in convertible participating shares. A loan will be made available to support future projects. The preference shares, if converted, would give the NEB 28.5 per cent of the enlarged ordinary share capital.

The second company, in which the NEB has agreed to invest £116,000, is James Howorth, of Farnworth, Greater Manchester. It specialises in advanced air engineering for hospitals and the pharmaceutical industries and has a £1m turnover and 82 employees.

The Board will acquire 21.4 per cent of the enlarged ordinary share capital and subscribe £80,000 for cumulative redeemable preference shares. It will have an option to acquire additional shares from the Howorth family to give it a 28.6 per cent stake in the issued ordinary share capital.

Mr. Hugh Howorth, the chairman, said the agreement would enable the company to exploit new products and strengthen its position overseas.

Collinson Grant Associates, partner with the NEB in Sapling Enterprise, was founded in 1971 as a firm of management consultants. It employs 15 consultants.

Computing attracts more students

By Michael Dixon, Education Correspondent

APPLICATIONS for next autumn's university courses have already outstripped those for last year, with computing, attracting over 50 per cent more candidates, according to the Universities Central Council on *Admissions.*

The final total seems likely to be up from last year's 157,500 to about 167,000—an increase of 6 per cent.

Of the 157,670 new applications to February 15, UK men account for 99,009 (up 3.4 per cent on last year's corresponding figure), UK women for 58,661 (up 11 per cent), and overseas candidates for 22,064 (up 7.5 per cent).

AA insurance launched

FINANCIAL TIMES REPORTER

A PERSONAL accident insurance scheme offering more than £70,000 in the case of accidents has been launched by the Automobile Association.

The accident protection policy, for AA members, costs £15 a year and is underwritten by the Guardian Royal Exchange Group. The policy covers people involved in accidents as pedestrians, drivers or as passengers in a car, bus or train.

The policy provides a £15,000 lump sum in the event of the policy-holder's death, loss of limb or permanent disablement and a £20-a-week for up to two years if the policy-holder is prevented from working as a result of the accident.

Also, hospital fees of up to £30-a-day are paid for up to five years—a possible maximum of £54,000—and £500 is available for a recuperative holiday if the accident victim is in hospital for more than four weeks.

Cover is for 24 hours-a-day anywhere in Britain and up to 30 days worldwide, any AA member aged between 18 and 70 is eligible with additional cover for families.

Leftist fails in union appeal

By Christian Tyler, Labour Editor

THE FORMER Yorkshire executive councillor of the Electrical and Plumbing Trades Union, Mr. Harold Best, yesterday lost his appeal against the conduct of the election in which he was defeated by 435 votes.

The union's executive decided there was no cause to re-run the election, after hearing a report from the Electoral Reform Society which conducted it.

Mr. Best, a Left-winger, had protested to the union's Right-wing leadership, chiefly that batches of ballot papers had been sent to members of a large white-collar branch, not at their own addresses, but at their employers'.

A union spokesman said yesterday that all members of that branch entitled to vote had received ballot papers forwarded to their homes by their employers, N. G. Bailey, a large Bradford-based electrical contractor.

This branch of the union's white-collar section, the Electrical Engineering Staff Association, was said at the time of the election last year to have about 600 members. But yesterday's report to the executive said only 460 had been entitled to vote, and that that number of papers had been sent out. The spokesman said only a handful of members who had moved house did not receive papers.

Yesterday's decision means that the Right-Wing winner, Mr. William Hayes, who was an associate director of N. G. Bailey at the time of the election, is confirmed in his seat.

British strikers 'no better off' than Europeans

By Our Labour Staff

STRIKERS in Britain receive on average no more state benefit than strikers in most other West European countries, according to a survey of benefits in 10 countries.

The survey goes some way towards refuting claims that British strikers are more privileged because of the social security tax benefits open to them.

The survey, in the European Industrial Relations Review, says that though strikers are not allowed unemployment benefit in the countries examined, except for a few cases in Belgium, state support is usually given to strikers' families, or to the strikers themselves.

That support, the survey says, is invariably means-tested and takes the form of a loan or benefits in kind, and is usually paid only when union benefits fall short of the strikers' needs. In the UK, benefits are available from specific schemes.

The report notes, however, that strike payments by British unions are far less than those in Europe. Benefit from the largest union, the Transport and General Workers' Union, is £6 a week, but most unions can make special hardship payments.

Ambulancemen begin tough industrial action

BY PHILIP BASSETT AND ALAN PIKE

AMBULANCE CREWS in some parts of Britain yesterday began taking tough industrial action in advance of Friday's threatened total strike despite pleas by union leaders to maintain emergency services.

In Newcastle, police and voluntary services made hurried arrangements to provide an emergency service after the city's 100 ambulancemen began an indefinite strike. Army ambulances again appeared in London when crews at some depots refused to handle calls from doctors.

Unofficial shop stewards have called for a national 24-hour total ambulance strike on Friday in protest against a pay offer of 9 per cent and a comparability study on which public service workers are now voting. National union officials have condemned the strike call and Mr. David Ennals, Social Services Secretary, yesterday described it as "an act of appalling irresponsibility."

The Confederation of Health Services Employees said yesterday that its members in many areas had rejected the strike call but Mr. Colin Barnett, North-West regional organiser of the National Union of Public Employees, predicted that 1,000 Greater Manchester ambulancemen would be among those who did strike.

The public services pay offer will face another important test today at a delegate conference of one of the four unions involved, the Transport and General Workers.

Nurses, who are seeking pay increases of between 15 and 25 per cent to compensate for claimed erosion of earnings since 1974, began talks with the employers yesterday. Negotiations were still in progress last night.

The Prime Minister, speaking at the opening of new General and Municipal Workers Union offices in the West Midlands, said yesterday that the Government and trade unions could "solve the problems better than anybody else because we understand each other." He made a vigorous defence of the unions against "hysteria in the newspapers and elsewhere."

Mr. Callaghan said great progress had been made by establishing a new agreement between the trade unions and the Government. The country had a good foundation on which to work.

The Goverment was determined to face up to problems and be held to account by the electorate.

Civil service union leaders yesterday began to press the Government for firm indications on pay in the light of an apparent change in the Prime Minister's previously firm attitude towards the strike action being taken by the two largest unions in the service.

Mr. Callaghan had condemned the action as "unnecessary and unjustified," but in a BBC television interview on Monday seemed to be softening his attitude, according to the unions.

Union leaders were prepared for further strong criticism, as a reasonably firm indication that the Government might be more forthcoming over pay. The first of a series of meetings this week took place yesterday to find out how far the Civil Service department might be prepared to move.

The Government has given assurances that it will base a settlement for the 600,000 white-collar civil servants on the findings of an independent comparability study, although the deal will be staged. Union leaders want more detailed assurances on how payments will be staged and on the future of Civil Service comparability.

The selective strike action by some 1,300 civil servants, particularly in Government computer centres, continued yesterday and will be stepped up this morning by picketing of the Stock Exchange as union members who stamp share exchange certificates are called out.

Journalists' union expels 96 for defying strike

BY PHILIP BASSETT, LABOUR STAFF

THE National Union of *Journalists* has expelled 96 members in the first round of disciplinary action after a seven-week strike over pay by provincial journalists which ended last month.

The expulsions indicate that the union's executive is prepared to take a tough line with those members who failed to follow its instructions and take part in the union's first national strike against Newspaper Society member companies. An average increase of 14.5 per cent was secured by the stoppage.

Chapels (union office branches) throughout the country are likely to be affected by the executive's line. Complaints against a further 500 members have still to be heard by the union's complaints committee.

The 96 journalists in the South and the West Country received expulsion notices yesterday after the union's executive had considered recommendations by the complaints committee on 124 members. Five were cleared, and in a further 23 cases decisions varied from the upholding of complaints to fines of between £30 and £100.

The 96 *journalists* are mainly staff members who refused to strike, though some are freelances who continued to file material in defiance of instructions. All the journalists may appeal under the union's rules.

One group still to be considered by the committee comprises the 115 journalists from Birmingham and Coventry who failed in a High Court action to prevent the union from taking disciplinary action against them.

The union had hoped to conclude its disciplinary proceedings by its annual delegate meeting in April, but that now seems unlikely. The union's executive is expected to consider further reports from the complaints committee at its next meeting at the end of March.

Teachers' leader hits at opponents of wage claim

BY MICHAEL DIXON, EDUCATION CORRESPONDENT

MINOR TEACHERS' unions publicly opposing a claim for an immediate rise of 36.5 per cent were being "at best naive and infantile and at worst cynical and irresponsible," Mr. Fred Jarvis, general secretary of the National Union of Teachers, said last night.

The NUT has an absolute majority on the teachers' panel of the Burnham Committee, where the pay claim will be put to the education authority employers on March 7.

But smaller unions, particularly the National Association of Head Teachers, have said that the demand should be for a phased restoration of the average 36.5 per cent by which teachers say they have fallen behind comparable workers since the Houghton award of 1974.

Mr. Jarvis said: "Teachers have nothing to gain, and everything to lose," from minority organisations which engaged in a "public auction as to the length of time over which they would like to see Houghton restored, when there is no indication yet that the management panel will even offer to restore Houghton."

Plessey warns staff over factory future

PLESSEY Telecommunications last night posted a warning letter to all 4,300 employees at its Edge Lane factory, Liverpool, where deadlock has arisen over a three-year plan to make the factory viable with 800 redundancies.

The workers were told bluntly that matters were in their hands and that the company was making progress on the essential points of Post Office pricing and government assistance. But a third vital point, the 800 redundancies, has been rejected by the shop floor at Edge Lane after national talks.

Engineers want industrial reform

BY ALAN PIKE, LABOUR CORRESPONDENT

THE CONCORDAT between the Government and TUC recalled earlier solemn and binding undertakings given by the trade union movement, but provided no basis for a permanent and stable system of industrial relations, Sir Geoffrey Hawkings, president of the Engineering Employers' Federation, said yesterday.

He was opening Employment in Engineering, the federation's first national study conference.

"One might conclude that the chaotic termination of pay policy demonstrates the unrealism of designing a policy where the suspension of the laws of the market rests on nothing stronger than the desire to maintain a special relationship with union power," he said.

"The result of such a policy has been to give small groups the power to hold society to ransom and, within unions themselves, for power to slide from the union leadership to the shop steward."

Sir Geoffrey said he believed that society now largely recognised that it must protect itself from "exposure to the recent damaging display of force." Sooner or later a new government must have the courage to build on that recognition to achieve a more stable and balanced industrial relations system.

Pay policies had made the *engineering industry's disputes* record an imperfect reflection of its industrial relations, he said. "An industry is not to blame if unions choose it as the killing-ground for a government's pay policy."

Lord Robens of Woldingham, chairman of Vickers, told the conference that the trade union movement must kill its fatted calves and accept change. "The day of the multi-union is over—it no longer fits into a modern industrial society," he said. "Industrial unionism stands out quite unmistakably as the modern approach to trade union organisation."

Agreements honourably entered into by unions and employers were of little or no value. The days of the trade union leader who could ensure that agreements and procedure were carired out were rapidly coming to an end. Ways must be found of "keeping the customer while we argue about the division of the national cake."

Dr. J. S. McFarlane, general manager (personnel) of GKN, said that resolution, "even some degree of obstinacy on the part of management," was needed. Managements should agree on simple rules of conduct, to offer one another support and refuse to find reasons for circumventing them.

The new engineering industry procedure agreement, for instance, was frequently ignored. Those who broke the rules were allowed to profit with the connivance of union officials and employers alike.

"Much of the responsibility, I submit, belongs to the employers, for it is they who turn the blind eye and make the concessions," he said.

Fair bargains could be struck only between parties both of whom wished to succeed and would suffer in the event of failure.

"It is idle to pretend that responsible bargaining is possible between the man who carries the hand grenade of strike action and the man who has been disarmed by one-sided legislation," he added.

Mr. Anthony Frodsham, director general of the federation, said that the engineering industry contained too many competing unions with leaderships too subject to change to provide firm platform for building a new accord with the employers. If the national pay structure broke down, the employers might wish to return to it only if agreement "took place with one union and covered all workers and if the bargain made was legally enforceable."

The Times call to print union

BY OUR LABOUR CORRESPONDENT

THE National Graphical Association was yesterday urged to take part in negotiations on the Times Newspapers dispute by Mr. William Rees-Mogg, editor of The Times.

Mr. Rees-Mogg, speaking at the Engineering Employers' Federation conference, said that the NGA was the "most *obdurate*" of the unions involved. He had some sympathy for its historic fears about the possible effect of new technology on its members' craft but "it is wrong for them to refuse to enter into negotiation."

Publication of the Times Newspapers has now been suspended for almost three months. Apart from staff who have signed new agreements with the company, the last group of employees who received dismissal notices after publication was suspended—about 1,300 of them—will be taken off the pay-roll in mid-March.

The TUC and Government are keeping in close touch with the dispute and a new bid to start negotiations is possible before the final notices expire.

Mr. Rees-Mogg said that Times Newspapers negotiations had been in progress for so long that in at least two areas—plans for a commercial computer and an 80-page Sunday Times—"the equipment we originally installed is now obsolete and will go out of the building without ever having been used." Negotiations in these two areas had taken four years and 12 years respectively, so far without any success.

He criticised the "sheer incapacity *of most of the* trade unions with which we have to deal to carry out coherent negotiations, let alone negotiations of some complexity."

But, said Mr. Rees-Mogg, Times Newspapers was not going to surrender to the "incoherent immobility" of some of the unions.

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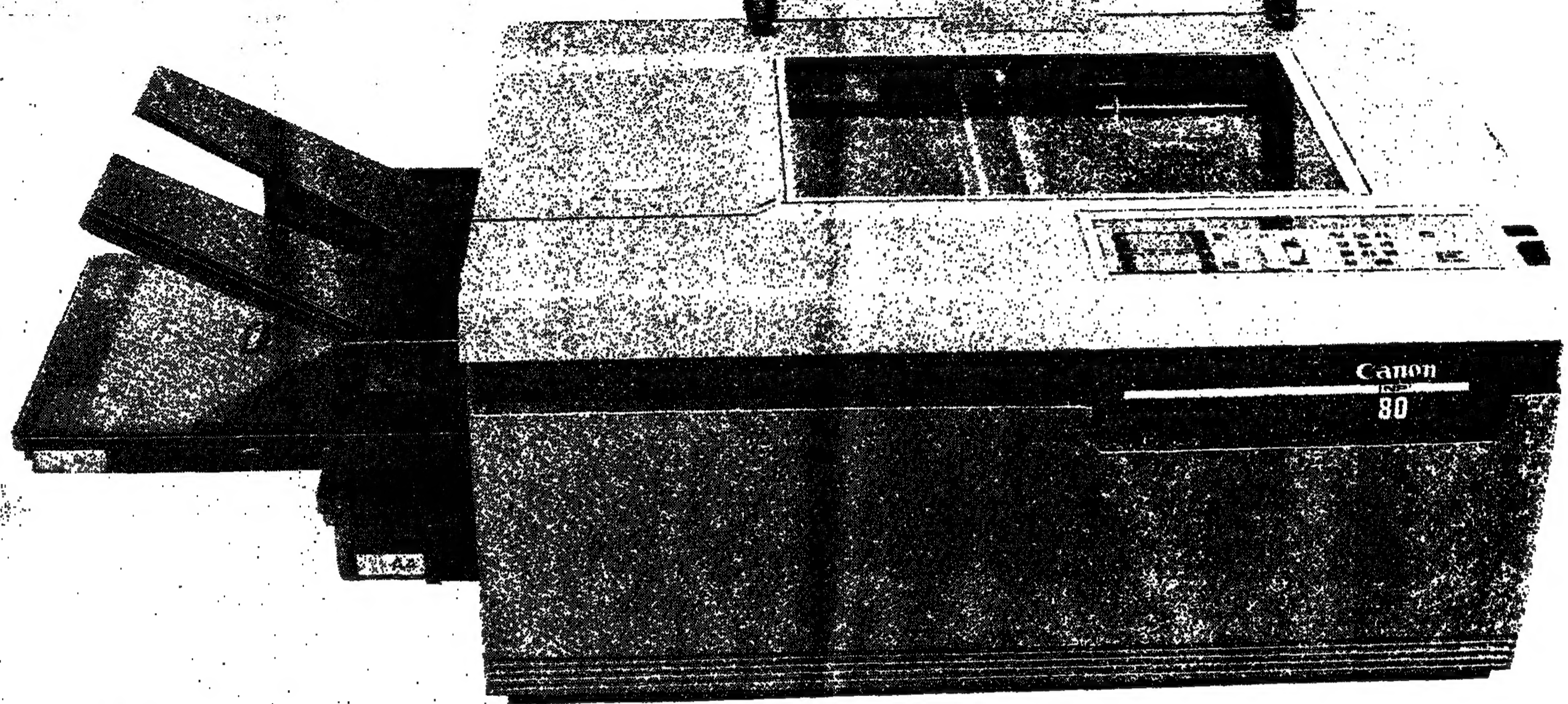

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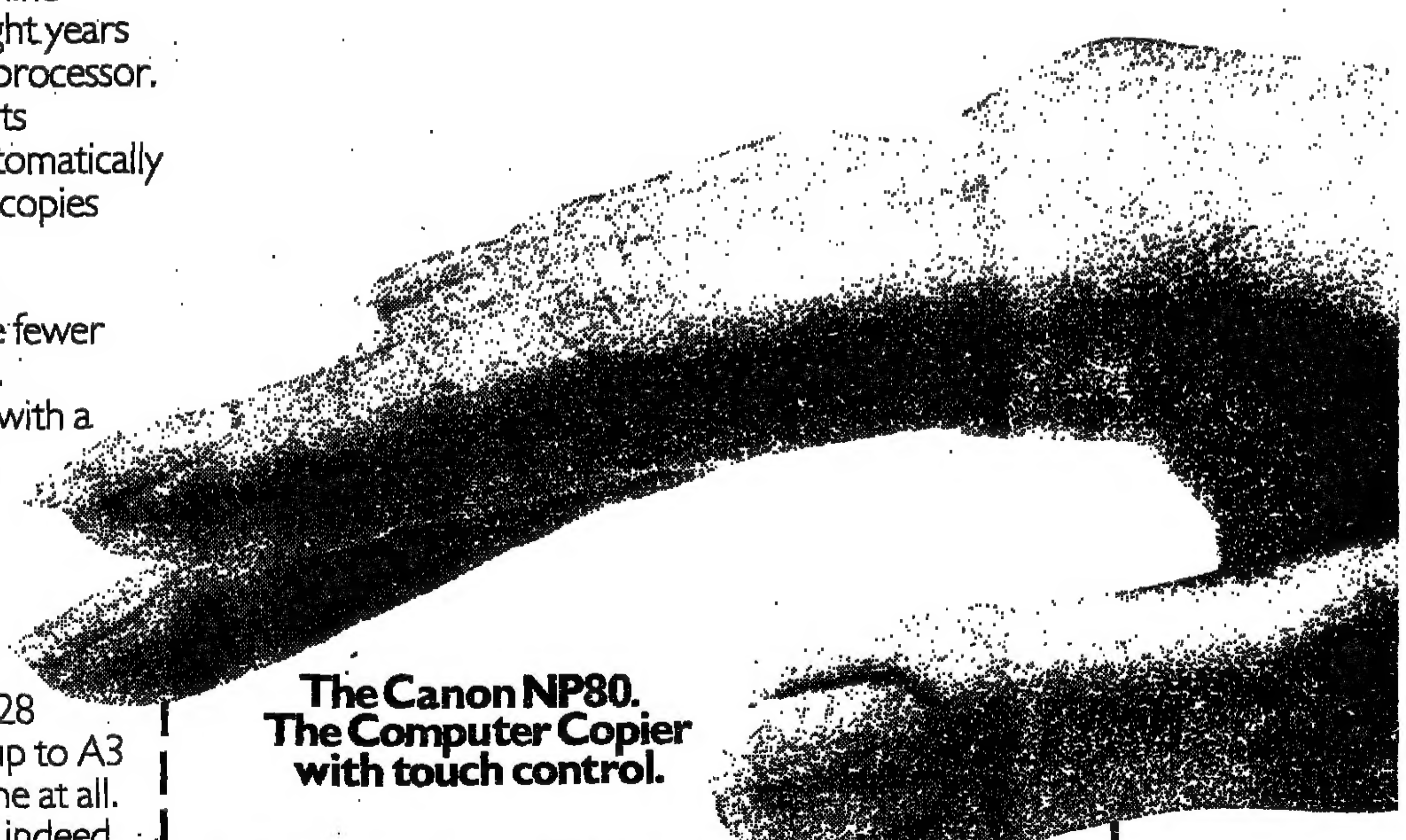

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CONSERVATIVES COUNT ON CONFIRMATION OF LEAD

Clitheroe result is not in doubt

BY PHILIP RAWSTORNE

CONSERVATIVES COUNT on the Clitheroe by-election tomorrow to confirm the party's daunting lead over Labour in the opinion polls.

A Tory victory in Clitheroe, a rambling constituency on the flanks of the Lancashire Pennines, has never been in doubt. Labour has not won here since the national landslide of 1945.

The campaign revolves merely round the size of the Conservative majority. Labour's prime objective is to restrict it to its 1974 level of 7,000 votes.

That at least would offer Mr. James Callaghan, the Prime Minister, some hope of retaining Lancashire's critical marginals in an autumn general election.

However, after Mrs. Margaret Thatcher's recent and regal tour of the area as Leader of the Opposition, the Conservatives' progress appears unlikely to be checked among the hills. The mist over Pendle may once have concealed magical events — witchcraft was disclosed there in the early 1600s — but now it hides no threat to the Tories more serious than complacency or apathy.

The constituency and its 54,000 electorate cover a disparate collection of individual communities: farming, industrial and suburban.

Mr. David Waddington, the Conservative candidate, descends into the industrial fringe from his assured electoral base in the north with increasing confidence in his ability to take votes from Labour and the Liberals.

Briskly, he focuses his campaign on a list of the Labour Government's failures and the Liberal sin of supporting such a record for so long in the Commons.

He has the advantages of a local identity and long political experience. A barrister and director of two local textile mills, he has been active in politics in North-East Lancashire for 30 years. He contested several nearby seats before winning neighbouring Nelson and Colne in a 1968 by-election and holding it for six years.

Supported by more leading Conservatives than have been evident in the concurrent devolution campaign, he is satisfied that the drift of votes his way has been as substantial as that of the snow on the moors above.

He is relaxed but meticulous: "I have met enough people, heard enough about their feelings towards the Labour Government, to expect a very significant swing to the Conservatives."

Labour's bid to maintain a respectable second place rests with Mr. Lindsay Sutton, a young and energetic journalist. It is his first parliamentary contest but he has cultivated the constituency assiduously for three years. Membership of the Labour Party has trebled in the period.

Mr. Sutton has a natural feel for politics, but that owes less to his degree in political theory than to an instinctive and lively concern with the people and situations of the area.

Born just over the Pennines in Yorkshire, he defends Labour's record in much the same no-nonsense style as Mr. Callaghan. The Government has pulled the country out of a deep crisis and offers the best chance of achieving industrial peace and reducing unemployment, he declares.

Mr. Sutton's task in holding the Labour vote together may be helped by the area's low unemployment: 2 per cent. The constituency has also escaped the harsher effects of the public-service strikes that affected the larger towns and cities.

He has sought to ease any disillusion with the Government by emphasising the protection that it has afforded to jobs in the local textile and other industries; by promoting efforts to maintain rural bus services and village schools.

The 8,000 or so Liberal voters of 1974 are likely to be less susceptible to that appeal than to sustained pressures from the Conservatives. Support for Mr. Frank Wilson, the Liberal candidate, appears to be even more uncertain than Labour's.

The bearded and voluble Mr. Wilson cuts a rather lonely figure as he echoes Mr. David Steel's call for co-operation in a programme of national recovery.

Mr. Wilson, a metallurgist turned technical representative, finds sadly that the voters have little trust or confidence left in politicians.

"We must bring together people of all parties and none," he declares. But Liberal MP Mr. Cyril Smith found the process depressingly slow in the bleak and deserted streets of Great Harwood and Padiham this week.

"Are you voting for us this time?" he inquired, grasping each fleeting passer-by.

"I'll have to think about it," each responded with an air that suggested that such a notion had never crossed their minds.

Candidates

Mr. David Waddington (Conservative).
Mr. Lindsay Sutton (Labour).
Mr. Frank Wilson (Liberal).

October 1974 result

Mr. A. D. Walder (Con.)	19,643
Mr. B. McColgan (Lab.)	12,775
Mr. C. W. Roberts (L)	8,503
Con. majority	6,868


Mrs. Thatcher, Opposition Leader, meeting a mill worker in the Lancashire Tory stronghold.

Opinion poll again shows big Welsh 'no' vote

BY ROBIN REEVES, WELSH CORRESPONDENT

THE PROSPECT of a crushing defeat for the Government's Welsh devolution proposals was again indicated in a BBC Wales opinion poll, published last night.

The poll indicated that only 22 per cent will be voting Yes for a Welsh assembly in tomorrow's devolution referendum.

Some 65 per cent said that they would vote against, and only 12.8 per cent said that they had not made up their minds.

The results correspond broadly with those of a Western Mail-Harlech Television poll before the weekend. They represent a sharp deterioration in Welsh support for the Government's devolution proposals, compared with the position three weeks ago.

However, the latest poll again suggested that the turnout would be 77 per cent of the electorate, which both sides in the campaign consider highly unlikely. A turnout of between 50 and 60 per cent is expected.

The breakdown of the new poll indicates that in none of the eight Welsh counties will there be a majority for an assembly.

The Yes vote in the Welsh-speaking heartland of Gwynedd is put only marginally higher than that of Gwent, formally Monmouthshire.

The poll was conducted nearly a week ago, but, clearly, little prospect exists that the Yes campaign might make up such a wide gap in the interim.

£13m to run Cardiff assembly

By Paul Taylor

A WELSH assembly is likely to cost the UK taxpayer £5.9m in initial costs and £13.7m a year to run, Mr. Denis Healey, Chancellor of the Exchequer, said yesterday in a Treasury statement.

The proposed Welsh asembly would ocupy the former Coal Exchange building in Cardiff. Converting and equipping it would cost about £3.5m.

Other "once-and-for-all costs" would include £1m for equipping the office accommodation and £1.4m for moving staff to Cardiff.

The Chancellor said that the assembly would have to recruit and provide accommodation for about 1,500 additional staff. The annual cost of doing that and running the assembly would be about £13.7m.

Mr. Healey described the initial capital costs as very small compared with recent expenditure by local authorities on accommodation. The running costs were again a "tiny sum" compared with the cost of local authority administration in Wales.

The additional costs represent less than a halfpenny a week for every person in the UK. That might be reduced if the cost of local government in Wales falls after devolution.

CBI launches final devolution attack

BY ANTHONY MORETON, REGIONAL AFFAIRS EDITOR

IN A final attack on devolution before polling takes place tomorrow the Confederation of British Industry in Scotland accused the Government yesterday of spending money needlessly on a political concept when urgent attention should be paid to creating more jobs.

Mr. Alan Devereux, chairman of the Scottish CBI, said in Glasgow that if the Government had allocated the money towards job creation that it was putting into an assembly, it could create 20,000 jobs in Scotland alone.

That was of far greater importance than another layer of bureaucracy.

Uncertainties

The Scottish CBI is particularly concerned that if Wales rejects devolution and Scotland accepts it, new industrial investment will gravitate towards Wales. Mr. Devereux said that his members saw that as a real possibility.

Because of the uncertainties facing commerce and industry, he said, businessmen were hardening in their opposition to devolution.

The latest sounding of CBI members in Scotland had shown that 84 per cent of them opposed the Government's proposals and only 10 per cent supported them.

A last-minute letter is being sent to all members in the country telling them that abstention is not sufficient. If they want to make their voice heard, they must vote No.

Devolution was at best an irrelevancy; at worst an extremely dangerous concept.

On the other side of the fence, Mr. David Steel, the Liberal Party leader, said in Peebles last night that it would be a tragedy if a last-minute failure of nerve caused the promise of an elected Scottish assembly to disappear after 10 years of debate.

In an attempt to play down the fears of those who believe that devolution is only a step on the road to separation, he commented that the absence of devolution was more likely to stimulate separation. He denied that an assembly would lead inevitably to an extra layer of government.

If the Scottish people vote No, he said, they would have no realistic chance of any better scheme being made available in the future.

Meanwhile Mr. Douglas Harrison, assistant secretary of the Scottish TUC, launched a vitriolic attack on the BBC for daring to record a programme on devolution in Oxford.

"The Governors of the BBC," he thundered, "are providing evidence that the principles of devolution are right."

He based that reasoning on the fact that viewers in Scotland were being offered the spectacle of "the self-opinionated offspring of the upper classes trying to influence the outcome of the referendum."

Insults

He said: "The gowned goons decided overwhelmingly that we should not be allowed devolution. As Oxford students are still predominantly the sons and daughters of the British ruling class, no other outcome could be expected.

"It is the ultimate in insults to the Scottish people that the election should be subjected to the opinions of these people."

If nothing else, Mr. Harrison has provided a little light relief at the end of an otherwise unpolemical campaign.

Scots supporters suffer nerves

BY RICHARD EVANS, LOBBY EDITOR

REACTIONS WERE distinctly nervous among the Scottish devolution supporters yesterday to the latest opinion polls, showing a hardening of the No vote and the prospect that the required 40 per cent vote would not be reached in tomorrow's referendum on the Government's proposals for devolving power.

If the polls prove right and there is a narrow Yes majority, it will not just be Scotland's constitutional future that will be at stake. That of Mr. Callaghan and his minority administration will also hang in the balance.

What started as a political project to neutralise rising Scottish nationalism and protect Labour's base north of the border might prove a last-ditch attempt by the Prime Minister to retain power for a few more months to improve Labour's chances in an autumn election.

Given a Yes majority, the Government will probably be able to hold the line against any Conservative censure motion next month. Scottish National Party (SNP) strategists maintain that they will give the Government every opportunity to set up the Edinburgh assembly. They allow five or six weeks for that.

They have no intention of joining the Tories in the Commons division lobbies so long as there is a prospect that that can be achieved.

Significantly, such a time scale might give Ministers the opportunity of bargaining with the SNP on setting up an Edinburgh assembly and on the Budget and the subsequent Finance Bill.

Until a few weeks ago it was widely expected that the Yes campaign would win by a handsome margin even if the 40 per cent hurdle was not surmounted. But three factors seem to have caused damage.

The first is that official Labour Party support has had only a marginal effect on the considerable numbers of Labour activists who oppose devolution. They regard the SNP as their natural political enemy and fear that devolution is playing into the nationalists' hands.

Second, it was thought last autumn that the authority of the Prime Minister, heading the Yes campaign, would give it formidable impetus. However, the battering Mr. Callaghan has received from the winter round of industrial strife and the Conservatives' electoral resurgence have meant that the campaign spearheaded by Labour has been a mixed blessing.

Finally, devolution supporters admit that they have had greater difficulty than they expected in convincing a sceptical public of the advantages of an assembly. That contrasts with the opponents of devolution, who have offered terrifying projections of the cost and of a massive bureaucracy.

Although some Labour MPs remain convinced that the 40 per cent vote will be reached, perhaps a more realistic assessment came from an SNP leader who wondered whether the Scots were a naturally conservative race who were attracted to the prospect of home rule but got cold feet when it came to the critical choice.

Devolution supporters believe that their best hope of wining convincingly is to hammer home the message that failure tomorrow will not only mean the end *of any prospects of devolution* for years but would continue to sour Scottish and UK politics for a generation.

The question is whether they will be any more succesful in getting that across in the last two days than they have been so far.

Indifference is only skin-deep

BY ANTHONY MORETON

EDINBURGH AND Cardiff have two things in common this week: they are the putative homes of the assemblies for *Scotland and Wales and each is* displaying monumental indifference to tomorrow's referendum.

Beneath the surface, though, there has been activity. Most has centred on the professionals, of course, and this week the politicians from Westminster have descended on both countries en masse.

It is not the professionals who are going to determine the outcome: the number of people turning out will be crucial, especially as the proponents of devolution have to overcome the 40 per cent hurdle inserted at the insistence of Labour backbenchers at Westminster.

But all the evidence is that the issues have got through to the electorate and turnout will *be high.*

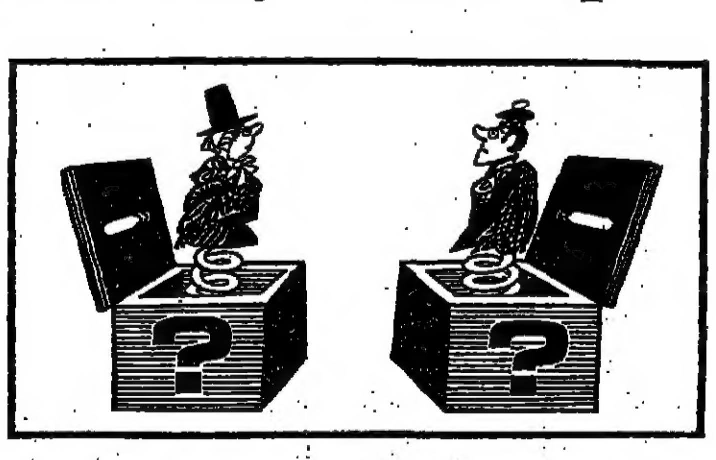
Turnout

Recent Welsh polls suggest that 77 per cent of the electorate would vote, which would be better than at the last General Election in 1974. The indications are that the poll will be high in Scotland, too.

It is a widely held view in England that devolution is not really wanted.

If that proves so (and it would appear the likely outcome in Wales), at least there has been a greater feeling of involvement in the issues than was the case about entry to the EEC.

Yet the campaigns in both countries have been fought on a shoestring. Compared with the vast amounts spent on general elections and that made available for the EEC referendum, this has been the poor man's election.



It has also been a time when unlikely liaisons have been formed. It may be going too far to say that Labour has jumped into bed with the Tories and the nationalists, but at least some of them have been *seen under the same roof.*

Political friends have found themselves on different sides and having to make new, if temporary, alliances.

In Wales the six dissident Labour MPs have been campaigning vigorously for a No vote beside an almost united Conservative Party. Labour Ministers have been found on the same platform as Plaid Cymru members and Liberals.

In Scotland, the Labour opposition has been more limited numerically but the campaign has been enlivened by a public debate between Mr. Tam Dalyell, Labour MP for West Lothian and an implacable *opponent of devolution*, and Mr. Jim Sillars, Scottish Labour Party MP for South Ayrshire and an equally strong advocate of the principle.

Another common feature has been the way in which the north of both countries has been wary of the southern halves. The big areas of population in Scotland's central belt and Wales's industrial valleys dominate politics and consequently the Highlanders and people of North Wales tend to take a jaundiced *view of attitudes held in the* South.

Elections

Next week it will be back to normal. The usual battle lines will be drawn and the activists will be back preparing for council elections, the EEC election and eventually the general election.

This is the year of elections. Mr. Anthony Wedgwood Benn said in Wales this week that the devolution campaign has been an exercise in participative democracy.

Most people probably do not see it quite that way, but deep down, that is what it comes to.

The people of Scotland and Wales have been asked whether they want a particular form of government. Having been asked that sort of question it is just possible that they, and others, might get a taste for it, which cannot be bad for democracy.

Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

● HORTICULTURE

Longer life plastic greenhouse

BECAUSE IT uses extra ultra violet stabilisers, and is more able to withstand fierce sunlight, a material called Polyvene is used for a commercial greenhouse which promises to last twice as long as a traditional *polythene greenhouse, claims* Polybuild, New Alresford, Hampshire.

Prototypes, based on a Continental system, were developed by the company for the exacting climatic conditions of the Middle East. Model now introduced to UK is called the JVT (Jordan Valley Tunnel) and is said to be the first UK polythene building to provide suitable growing environment for traditional glass house crops, such as tomatoes, cucumbers and peppers. Because of its width, it should allow excellent saturation planting of lettuce and celery.

The greenhouse consists of a galvanised steel frame (sufficient to withstand gale force winds, says the company), to *which polythene is fixed in a* series of 4.6 metre or 9.2 metre overlapping strips. These can be removed or parted in the summer to give controlled degrees of ventilation, either at the base, the sides, or the roof.

Clearspan structure is 9 metres wide and available in any length in multiples of two metres. Built in three sections, the steel frame arch has been designed to allow maximum working headroom along the outer edges.

Also wider than any other types, says the maker, the tunnel design additionally affords a greater growing area which results in better ventilation characteristics and, in the case of heated units, in reduced *heat loss.*

Steel framed doors are included in the specification, and the greenhouse is suitable for the installation of trickle and overhead irrigation lines, fans for ventilation, direct and indirect fired heaters, and ridge ventilation.

Usual polythene greenhouse of this type would last about two years, but the JVT is promised a life of at least four years. Drawback of poor ventilation in traditional polythene tunnels has now been eliminated in this new design, claims the company.

Overall cost of a 30 metres long JVT greenhouse is around £880.00.

Company says it is seeking distributors in all overseas territories to market this product.

One of the problems of linking instant calculation powers of modern electronics to the inevitably much slower working of mechanical parts, such as those involved in printers, has been overcome to a certain degree by Toshiba in the very neat hand-held machine shown here.

It is done by providing a buffer which gives a "safety margin" of eight key inputs and a single line of print. Thus, operation becomes much smoother when key stroking outruns the capabilities of the print mechanism.

It is a ten-digit machine with a Digitron tube display for high visibility. Four-key independent memory is provided and two-level computation covers successive addition and subtraction memory operations. Special function keys include sub-total, total, per cent/add-on/discount, clear, clear entry, and non-calculation entries.

Coded BC-1014PV, the machine operates on long life rechargeable nickel cadium batteries or directly from the mains. The company gives the suggested retail price as £95, plus VAT, which includes the batteries and the charger—a low price to pay for a machine which has all the abilities of the desk-top units being offered as replacements for the old mechanical machines, plus portability.

More from International Office Products, International House, Windmill Road, Sunbury-on-Thames. 093 27 85666.

● SAFETY

Suit protects from toxic atmosphere

ADEQUATE protection against serious health hazards arising from environments containing pathogens of dangerous diseases, radio active dust or other toxic particles, states Siebe Gorman and Company, Avondale Way, Cwmbran, Gwent, Wales NP4 1YR (063-33 61211), can be provided by its lightweight, one-piece suit incorporating an all-round-vision hood, called the Full Suit Powermask respirator.

High-efficiency filter draws air into the suit by means of a small electrically driven centrifugal blower at minimum rate of 120 litres per minute, thus maintaining a small positive pressure within the suit.

Wearer can breathe normally, says the company, and is free from the fatigue usually associated with breathing apparatus, while the positive pressure prevents ingress of contaminated air if, for example, the airtight fit at the elasticated wrist or ankle cuffs is disturbed.

Electric blower and interchangeable filter are mounted on a nylon coated plenum chamber to form a compact, lightweight unit, which clips on a *quick-release* waist strap so that it is carried at the wearer's rear left hip. Clean air is directed into the suit's hood by a 25 mm diameter convoluted hose.

Apart from protection against communicable diseases, says the maker, the equipment could also be used in the military field to provide isolation against radio-active fall-out from nuclear explosions.

Beating a problem fire

AN UNUSUAL combination of 620,000 cubic feet of nitrogen gas and 114 gallons of foam compound, helped BOC engineers to save equipment and raw material worth more than £3m from total destruction.

A hopper containing 600 tons of chocolate crumb had caught fire at the Cadbury Schweppes, Leominster, Herefordshire, factory and three other hoppers also containing chocolate crumb were in danger.

Within a day, engineers from BOC's mobile Inerting Services, based at Aston, West Midlands, had extinguished the fire and saved the chocolate stored in the neighbouring hoppers. The fire had been burning for two days before BOC was called in. Five fire appliances and 25 men had been spraying the hopper with water for 48 hours to prevent the fire spreading and it was accepted that the product had been destroyed.

By pumping a mixture of nitrogen/foam compound into the hopper ullage space above the product, and nitrogen from the bottom of the hopper through the product, the fire was effectively starved of oxygen. By continuing this technique, the temperature of the fire dropped rapidly and in about 12 hours the fire was out.

BOC on 01-560 5166.

● HAND TOOLS

Opens parcels easily

TECHNICAL PAGE secretary, Kathy, constantly complains about the time and trouble taken to open the more elaborate parcels and cartons delivered daily to our office. Her problem was solved yesterday with the introduction of a three-in-one tool from *Lawtons of Liverpool, 60* Vauxhall Road, Liverpool L69 3AU (051-227 1212).

Stubborn staples are removed, tough bands snipped across and thick cardboard ripped apart with a handy device which cuts, slits and extracts and, the maker assures us, will also assist in the speedier offloading of palletised shrinkwrap or stretched wrap loads.

Tool is called the Ideal Opener and is made from tough moulded plastic and steel. It is available with an individual company's name and/or logo *printed on the side.*

● MACHINE TOOLS

Polishes off the work

ABRASIVE BELT grinding *machines made in the U.S. by* Abrasive Engineering and Manufacturing of Minneapolis are to be marketed in the UK by P and S Shot Blast and Finishing Equipment, Coronation Road, Park Royal, London NW10 7PT (01-965 3834).

The machines are designed for the grinding, deburring and polishing of all types of metal *component. Belt widths ranging* from 8 to 60 inches are available.

Some machines have two or three heads which can carry out the functions of deburring and grinding of one or two sides, plus the polishing of the upper surface at one pass through the machine.

Grapes are cropped by diesels

BASED ON a British designed and built diesel engine as the power unit, machines built entirely in Australia are harvesting grapes, informs Perkins Engines Group, Eastfield, Peterborough PE1 5NA (0733-67474).

Grape harvesters are made by Patterson Engineering of Mildura, Victoria, Australia, and installed with Perkins 6-cylinder 6.354 agricultural diesel engines.

Machines operate by straddling a row of vines, shaking off and then catching the fruit and clearing it of any leaves or debris, then lifting it over the next row of vines where it is deposited into a bulk carrier.

Three harvesters make up the range: Vectur, with four-wheel hydrostatic drive, self-levelling capability on slopes and bucket conveyors to cut fruit and juice loss; Vectur Domestic — same four-wheel drive and self-levelling system, but using a locally developed elevator system; and the Domestic (the biggest seller in the range) which uses the local elevator system and has a two-wheel drive.

● HANDLING

Tanker for disposal of waste

MULTI - PURPOSE vacuum tanker will undertake any waste disposal task, from petrochemical tank cleaning to land disposal of sewage sludge through pipelines, asserts Whale Tankers, Ravenshaw Lane, Solihull, West Midlands B91 2SU (021-704 3191).

Specially designed to work at the highest possible efficiency for continuous periods, says the company, one of the most unusual features of the first 9,000 litre tanker is the provision of twin exhauster-compressors, although the total swept volume required is well within the scope of a single unit.

It has been found that smaller exhausters work at a lower temperature than bigger models when operating for extended periods, and also maintain high efficiency for longer than big exhausters. This is due to the high external surface to total volume ratio of the smaller units.

In addition to the vacuum system, the tanker has a screw-type positive displacement pump for discharging loads to land, either direct or through pipelines, and for pumping effluents into storage tanks or silos.

Lift for light loads

SMALL COMPONENTS and assemblies can be distributed vertically throughout a manufacturing complex by means of DD Lamson's latest handling system, the DL 10 lift.

Serving up to ten floors, the lift is powered by an 0.45 hp motor situated at the bottom of the shaft which simplifies inspection and maintenance and allows the top station to be installed under a desk, counter top, or production bench. On each floor, buttons light up to indicate "Lift Present" or "Lift Occupied."

The lift has over-travel limit switches, electrical contact and automatic mechanical door locks and a motor overload protection switch. It has a maximum load of 12 kg and the cage dimensions are 240 x 300 x 500 mm.

Lamson is at Gosport, Hants.

Sterilisers made safer

AUTOCLAVES, which incorporate integral thermal locks to prevent accidental door-opening at temperatures above 80 degrees C in compliance with proposed safety legislation, are to be launched on the market by Cabburn Sterilizers of 9 Towerfield Road, Shoeburyness, Essex (03708 6266).

Available with round, square or rectangular chambers, with either front or top loading or double ended formats, they are designed for sterilisation applications in research laboratories, hospitals and for the food processing, agricultural and pharmaceutical industries.

They are made from stainless steel and have temperature and pressure indicators, audible alarm, automatic timer switch with manual over-ride and a safety "blow-off" valve.

● *By agreement between the Financial Times and the BBC, information from The Technical Page is available for use by the Corporation's External Services as source material for its overseas broadcasts.*

● PACKAGING

Better carriage for eggs

MORE CARTON sizes are now needed following the introduction of the EEC's egg grading sizes, with the result that some 9,000 cases have to be produced weekly by Eastwood Egg Packers at its Cwmfrwdd, Carmarthen, South Wales station.

A quicker and more efficient system for sealing the cartons became necessary, and the company switched from stapling methods (which tended to distort cases with the result that egg breakages occurred) to a Scotch 7E carton taping machine system from 3M, PO Box 1, Bracknell, Berks. (0344 58247).

Taping has not only improved the appearance of the cartons but also gives more rigidity. Use of the system now means that 600 random size cartons an hour are sealed by the machine which runs for 12 hours per day continuously with a single tape roll change where, previously, the stapling magazine had to be changed every two hours.

● HYGIENE

Kills the bacteria

A NEW version of its Calmic automatic 24-hour-a-day washroom sanitising unit is being marketed by Wellcome Hygiene Services.

The company says the unit now has a reformulated detergent/bacteriostat concentrate, tests on which have shown it to be highly effectve in combating deposit-forming bacteria. The unit has a three-fold action which operates at each flush of the cistern. In addition to releasing a bacteriostat into the flush water, a detergent is also introduced and finally, a perfume is discharged into the *immediate atmosphere.*

After extensive laboratory testing, the new bacteriostat/detergent paste used in the unit has been proved to be far more powerful than its predecessors and at the same time to have a greater life expectancy, says Wellcome, which has its headquarters at Crewe Hall, Crewe, Cheshire CW1 1UB.

● PROCESSES

Removes oil from swarf

OIL EXTRACTORS which it is claimed will remove, by centrifugal action, 99 per cent of the oil content in swarf in less than two minutes are being produced by Bennett Guest, 6, Vigo Street, London, W1 (01-439 7808).

The extractors, which have been designed with pan diameters of 30 inches or less, offer rapid acceleration and running speeds of 800 rpm or more. They are capable of dealing with up to three tons of high density metal chips per hour.

THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

Looking for alternatives to family fortunes

MANAGEMENT of family fortunes in the grand manner is no longer a viable proposition, according to Raymond Armstrong. The problem lies in the area of costs, for "grand manner" means not only investing the family cash to provide both security and a good return, but also organising a wide ranging butlering service, arranging anything from long sea cruises to more mundane items like picnics.

Armstrong bases his view on long experience at Starwood Corporation, where he has been president for the past ten years. Starwood was formed in the late 1920s to manage the fortunes of the Rosenwald family—the late Julius Rosenwald was a leading figure in the establishment of Sears, Roebuck, the large U.S. retailing group.

There appears to be no lack of demand for the butlering side of the service—many of the more nouveaux riches are only too eager to sample it—but the organisation it requires and the rapidly rising costs involved make it less and less attractive to Starwood itself.

So Starwood has been moving into new areas recently, a trend which is gathering momentum as Armstrong seeks to establish links in Europe. It is not families he is now after, but institutions, such as pension funds, or individuals prepared to put up funds for specific "alternative" investments, as he describes them. Alternative investments are those made outside the stock market as a means of spreading risk.


Mr. Raymond Armstrong

Armstrong feels that there is a new emphasis in the investment world on avoiding risk. At the same time, the amounts of money which require investing are mushrooming, particularly in the pension funds.

The joint management groupings that Armstrong envisages would have Starwood providing experience at the U.S. end, with partners providing input in the UK and on the Continent.

Starwood already has a number of partnership ventures with American concerns under its belt. Five years ago it set up and took on the management of a company called Geneve, which is backed by Equitable Life and other U.S. companies. Geneve also includes family money—from the McNeils (Johnson and Johnson, child care products) and the Khiekhaffers (timber companies).

... Though avoiding involvement in more butlering activities, Starwood is still taking on family fortunes for investments in specific projects. In the past year it has taken on $50m, which includes the funds of Walter Beardsley, who headed Miles Laboratories, now part of the German Bayer chemicals group.

Some of Starwood's past "alternative" investments have been somewhat unusual. It owns, for example, the town of Starwood, in Aspen, and has a share in a French vineyard, Chateau Bouscaut. In the 1950s it backed the formation of Pantheon Press to encourage young authors in Europe — successes there included Dr. Zhivago, by Boris Pasternak.

Armstrong tends to favour a conservative line of investment in stock markets, which policy he claims has enabled the company to outperform many others over the years. Between 1972 and 1977, for example, Starwood's tax-free funds — that is, pension funds and foundation funds, which pay no capital gains taxes — achieved an annual compound growth rate of 6 per cent. This compares with the Standard and Poor's 500-stock average of 3 per cent per year.

Starwood's philosophy, says Armstrong, is to go into the stock market when it is thought that the total return (dividends, plus capital appreciation) will be higher than the yield on high-quality long-term bonds, and to get out when the bonds appear to be more attractive.

Nicholas Leslie

BUSINESS PROBLEM BY OUR LEGAL STAFF

Plumber's tax arrears

Some years ago a plumber of ours chose to leave and set up as a sub-contractor, and since then we have virtually used his services full-time. In April 1977 we received our 715 certificate, but because of tax arrears, he could not get one. In October 1977 we realised that he was never likely to get approval and after other disagreements, we ceased to use his services. Between April and October we withheld one third of his salary—about £700. We did this to cover debts of about £700 due to loans made to him to pay off his tax arrears, previous to April 1977. We have now been contacted by his accountant for a F.C. 60 for about £700 for the period April-October 1978.

If we agree to supply an F.C.60 we are liable for the monies to the Inland Revenue and may be accused of tax evasion by them. We are unlikely to reclaim our debt regardless of our success in court. In view of the specific and short-term nature of the employment, is there any defence we can offer the Inland Revenue and any claim we can make against the total sum?

As far as we can deduce the facts, you did not purport to withhold subcontractor's tax from the payments in question: you made payment in full, and simply applied part of the untaxed payments towards the reduction of the subcontractor's indebtedness to the company. You should explain the facts to the subcontractor's accountants, so that they will understand why you cannot issue an FC60, and probably the simplest solution is to put the subcontractor's accountants in touch with the company's accountants direct.

It is unlikely that you will be penalised for your indulgence towards the subcontractor, but the Revenue may ask for interest in respect of the period between (a) the time when the company should have paid over the tax it ought to have deducted from the gross payments actually made on account of the subcontractor's invoices and (b) the time when the tax is actually paid by the subcontractor himself.

The company's accountants will no doubt advise you to place the facts before the company's tax inspector, so as to make it clear that there was no collusion between the company and the subcontractor.

No legal responsibility can be accepted by the Financial Times for the answers given in these columns. All inquiries will be answered by post as soon as possible.

Sydney Paulden on how a sensitive work-reorganisation scheme was carried out

Manpower control without tears

WHEN George Duncan became chairman of Lloyds and Scottish, the Edinburgh-based financing group, a couple of years ago, he initiated great emphasis on manpower development. A new job, Director of Management Services, was created at the group's *main subsidiary company*, Lloyds and Scottish Finance, to take charge of personnel communications, Organisation and Methods, the staff college and training responsibilities, as well as transport. George Cruickshank got the new job, and the brief, "Make sure our resources are right."

Apart from money, the major resource of a finance company is people. George Cruickshank's priority was to ensure that the company had the right number of right people at the right time. Before he could embark on that, he had to know what the workload was and what it would become as the company continued to grow.

The finance unit had originated in 1947, staffed by seven people at head office in Edinburgh, with four branch offices. By 1977, the staff numbered 1,500 with about 500 at the HQ and over 1,000 distributed amongst 96 branches throughout Britain. "With that kind of growth," says Cruickshank, "you tend not to get time for all the management sciences."

A job evaluation scheme had been initiated by the company's own O and M section, but management had precious little data on which to base any manpower control or any forecasts for recruitment purposes.

Cruickshank convinced the chairman and the Board to invest in setting up systems that would give an up-to-date picture of the work to be done, analysed to provide —unit by unit—a detailed account of the manpower required, and evaluated so that the skills and wage or salary needed for each job could be identified.

Just over a year ago these tasks were put out to tender to consultancy firms. "Some sent in proposals off the top of their heads," recalls Cruickshank, "some sent in ready-made packages from the shelf, but others came in and did some research. We gave the contract to W D Scott and Co. whose experts sat with us for several days before coming up with a suggested approach that could improve things and make savings before making a bid for the job."

Scott's approach was to select nine members of the Lloyds and Scottish Finance staff to be trained in the analysis of office work and systems. They then investigated the work at head office and in all the branches, with only guidance from two Scott consultants during these operations. As a result, analysis and assessment of the work flow are now going on continuously, conducted by individual Lloyds and Scottish Finance managers, ensuring that things are not allowed to slide again.


Mr. George Cruickshank, director of Management Services at Lloyds and Scottish Finance

"In the first year," claims Cruickshank, "our savings covered the cost of the exercise by 300 per cent. We are currently handling a throughput of 38 per cent more transactions and have 22 per cent more financial cases on our books, yet our head office staff has been reduced by 14 per cent and our branch staff has risen by only 8 per cent."

Using the rougher yardsticks that were previously employed to gauge staff requirements, Cruickshank can point out that, without the new approach, the company would now have been paying salaries to 24 per cent more people in the branches and an unknown extra quantity of headquarters personnel. "Head office work was more difficult to assess and control. We only knew that staff numbers rose relentlessly."

How was this sensitive transition achieved? The moment that Scott was awarded the assignment, management and the sole union recognised by the company—the National Union of Bank Employees—were informed of the study that was going to be carried out. It was agreed that there would be no redundancies, but any reduction in staff would be achieved through natural wastage. Both sides agreed a redeployment clause, whereby management would be free to move staff from one type of work to another if the analysis highlighted any imbalances in the workload.

Candidates were invited to apply for training as members of the analysis team and eight men and one woman were selected for training. All were given a course on CWIP—Scott's Clerical Work Improvement Programme — and two were also instructed in techniques of job evaluation, as part of the process of setting wages and salaries.

The whole company was then told in detail what the approach was to be. The Board of Management, the area managers and the heads of sections were addressed by the consultants and by the management services personnel and were introduced to the new team of analysts.

The clerical workers were then issued by the team with work diary sheets, broken down into 15-minute bands. The employees were asked to log the main tasks they carried out during the day. The team used reference books in order to calculate how long each task should take and the manpower that was required to achieve this total of tasks.

George Cruickshank emphasises that the intention of the exercise was not to make the employees overwork. "There were generous personal allowances built into all our calculations for breaks, amounting to about one hour per person per day." This is in addition to the lunch break.

The job evaluation operation was carried out simultaneously. A committee of five was set up to hear appeals against any contested job description and assessment, comprising two union representatives, two local management representatives, and a chairman from senior management. Jobs were graded for rates of pay.

In each section and in each branch, the local managers worked with the study team so that they could fully understand the approach and appreciate the CWIP and the job evaluation objectives and benefits.

The long-term "spin-off" from this has been extremely valuable, says George Cruickshank. Every month, each departmental head and each manager submit a CWIP report. It quantifies the workload, broken into different factors, and gives a detailed picture of staff availability.

"This means that we can all see at a glance how many hours of each different type of work there is to be done and how many manhours we have available to do it. The report gives an estimate of the future workload up to six months ahead and the recruitment that might be needed to cover it. This approach means that managers really have to manage, taking account of recent history and planning for the future. It fits like a complete jigsaw into the company's own 3-year corporate planning structure."

By analysing the actual work and the time it required, a re-arrangement of operations and personnel was able to achieve substantial immediate savings. August, for example, was always a big month for car financings, with the new annual registration number. Instead of staffing to accomodate this peak, a number of clerical operations not so sensitive to timing were either brought forward or delayed in order to leave personnel free to handle the car rush.

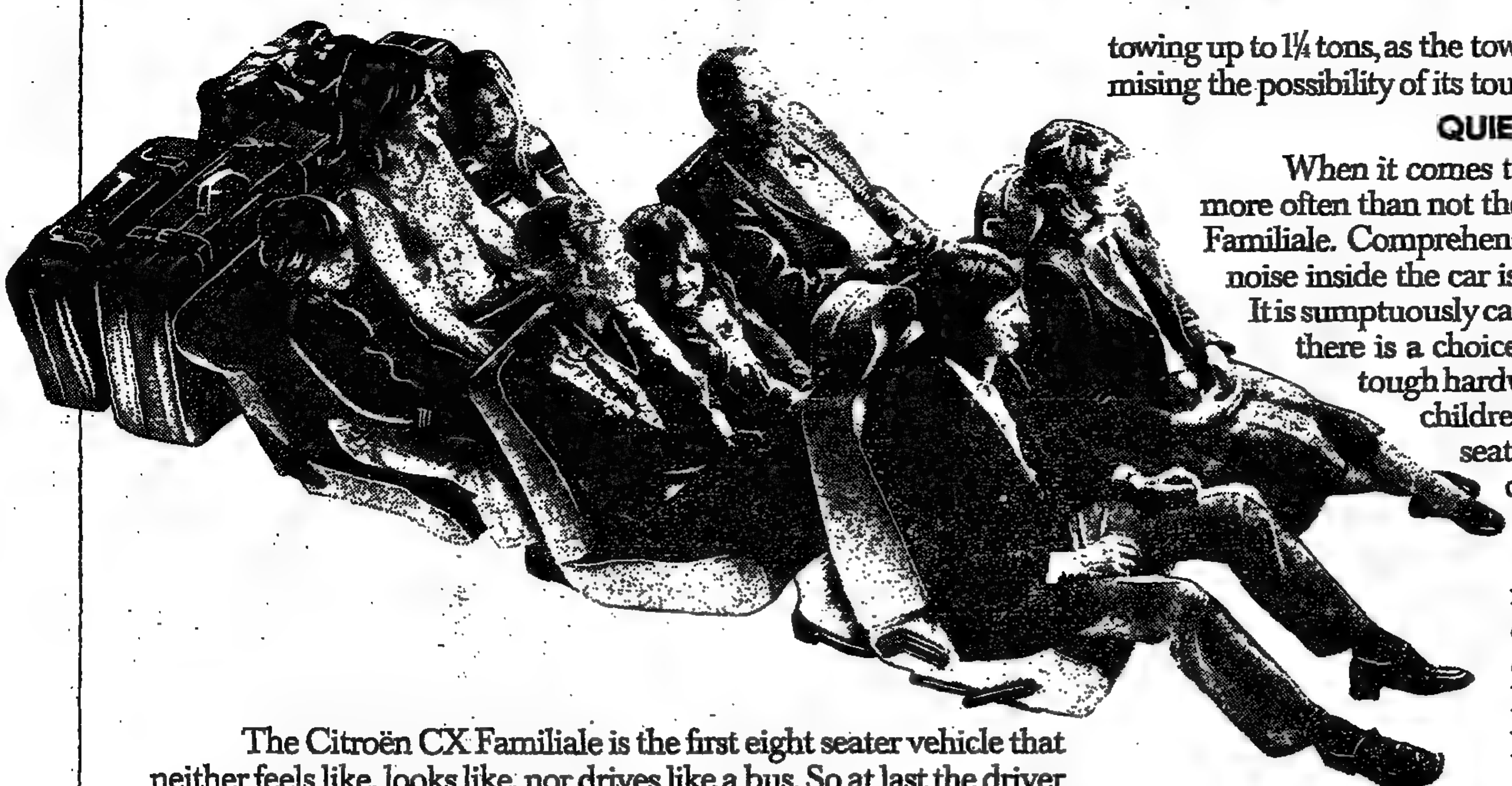
In some sections, "new business" paperwork had always been handled by a separate staff to that handling existing customer accounts. By studying the workflow, it was found that in many offices five interchangeable clerks could comfortably carry out all the tasks for both types of work, where previously there had been two teams of three people each.

The monthly CWIP reports are now providing information as Manpower Audits, greatly simplifying the personnel function for George Cruickshank and providing a wealth of data to assist management control and planning. On each manpower audit sheet there is a hierarchical chart naming all the personnel in the branch or department concerned. Each name has three numbers below it, indicating age, years served with the company and years served in the current position. Cruickshank's own chart, for example, shows him as 42/17/2, indicating he is 42 years old, has been 17 with Lloyds and Scottish Finance, and has been a director of management services for two years.

"This information is invaluable," he says, "for noting, well in advance of any crisis, which people are coming up for retirement age, so that a likely replacement can be spotted in good time. It shows us which key people may be suffering from job stagnation, so that we can give them a change or a step up before their feet get too itchy."

Not only has the scheme paid for itself in cash economies, but it is contributing to more effective management, making it possible for the managers to plan ahead and giving them time to keep the interests of their staff well in mind.

CITROËN INCREASE FAMILY ALLOWANCES.



The Citroën CX Familiale is the first eight seater vehicle that neither feels like, looks like, nor drives like a bus. So at last the driver who on occasion needs a large passenger carrying capacity has a civilised and economical alternative to either a second car or public transport.

PASSENGERS OR PARCELS?

The Familiale's seating is arranged in three rows. Two bucket seats in the front row, three individual bucket seats in the second row and a bench seat for three in the back row. And it is a pleasant surprise to discover that all the seating is of the same exceptionally high standard that has made CX a byword for comfort.

Of course if all the seating were fixed and static, the Familiale's carrying capacity would not be used to the full most of the time.

So the entire back row folds flush down to the floor and allows the Familiale to be turned into a five seater estate car instantly, with greatly increased luggage space.

A TOUGH CUSTOMER.

Seats apart, the Familiale is identical to its stablemate, the CX Safari Estate. Those who are familiar with the Safari will know just what good news that is. But for those of you who don't, it means that you can load well over half a ton into the Familiale, arrange it any way you wish, and still the car will remain level. As a result roadholding remains outstanding whether the Familiale is fully loaded or not.

This, of course, is due to Citroën's unique hydropneumatic suspension. All four wheels are independently suspended, and height correctors automatically adjust to ensure the car remains at a constant height from the road. This system makes for a superlatively comfortable ride even over the roughest roads. The self-levelling aspect of hydropneumatic suspension also ensures trouble-free towing up to 1¼ tons, as the tow-bar is kept at a constant height, minimising the possibility of its touching the road on sharp hills and dips.

QUIETLY DOES IT.

When it comes to interior refinements, estate cars are more often than not the poor relation. This is not true of the Familiale. Comprehensive soundproofing ensures that any noise inside the car is due almost entirely to its occupants. It is sumptuously carpeted throughout, and for upholstery there is a choice between luxurious jersey cloth and tough hardwearing Boxline, ideal for sweet loving children and mud loving dogs! The front seats recline fully and have adjustable detachable headrests. The driver's seat is also height adjustable.

VariPower steering is standard, making the Familiale a completely effortless car to park even in the most confined spaces. But VariPower also has a unique advantage over other power steering systems.

The steering gets progressively firmer with increasing feel as the Familiale goes faster, so long distance high speed cruising is much less tiring.

Another relaxing feature for the driver is the imaginative yet sensible fascia layout. All the instruments and the comprehensive array of warning lights can be seen at a glance and immediately understood through the distinctive single spoke steering wheel.

A TOUCH OF CLASS.

Performance too, puts the Familiale into a totally different class. Top speed is a swift 108 mph. Getting there is simple, especially with the optional C-matic transmission. Yet petrol consumption is quite extraordinarily low for such a big car. For example, you can confidently expect to achieve 30.7 mpg (9.21/100 km) at a constant 56 mph (90 km/h).*

SAFETY FIRST.

There are safety features in abundance. Fully-powered disc brakes always ensure full braking efficiency. Both front and rear ends are energy absorbing, helping to prevent damage reaching the rigid passenger compartment. In harness with its surefootedness, these features make the Familiale one of the safest cars ever seen on the roads of Britain.

A word of reliability. Underneath the Familiale's classic lines is a ruggedness of construction easily the equal of that found in its uglier competitors. Major services are only required every 10,000 miles. In addition, like every CX imported into Britain, the Familiale is given an extra thick underbody seal to keep the British climate out.

All in all, the Familiale is arguably the best family car you can buy. Because, with its uniquely flexible seating arrangement, it can take on any number of shapes and sizes. Just like families.

CITROËN CX FAMILIALE.

CX 2400 SUPER FAMILIALE (ILLUSTRATED) £6241.
CX 2500 DIESEL SUPER FAMILIALE £6591.
CX SAFARI 5-SEATER ESTATES. 2400 SUPER £6128. 2500 DIESEL SUPER £6481.

CITROËN

*SIMULATED URBAN DRIVING 19.5 MPG (14.5 L/100 KM). CONSTANT SPEED DRIVING 75 MPH (120 KM/H) 22.2 MPG (12.7 L/100 KM). PRICES INCLUDE CAR TAX, VAT AND INERTIA REEL SEAT BELTS, BUT EXCLUDE DELIVERY CHARGES (£76) AND NUMBER PLATES. OPTIONAL C-MATIC TRANSMISSION PETROL ENGINES ONLY £305. PRICES CORRECT AT TIME OF GOING TO PRESS. ALL CITROËN CARS HAVE A 12 MONTHS UNLIMITED MILEAGE GUARANTEE. PLEASE ENQUIRE ABOUT OUR PERSONAL EXPORT, H.M. FORCES AND DIPLOMATIC SCHEMES AND PREFERENTIAL FINANCE SCHEME. CHECK YELLOW PAGES FOR THE NAME AND ADDRESS OF YOUR NEAREST DEALER. CITROËN CARS LTD. MILL STREET, SLOUGH SL2 5DE. TEL. SLOUGH [illegible]

LOMBARD

Prudence at County Hall

BY COLIN JONES

FOR ALL the criticism of the minority of persistent big spenders among local councils, there has never been any real danger of British local authorities getting into the kind of financial pickle that faces New York, Cleveland, Tokyo and some Italian cities. The law forbids local councils in this country from going into permanent debt *to finance a revenue deficit.* Their power to levy local property rates to supplement a comparatively generous government grant system makes it unnecessary for them to do so.

The Greater London Council has now taken this tradition of financial rectitude an interesting step further. It has established as formal policy its recent practice of financing all non-housing capital expenditure out of revenue rather than new borrowings.

At first blush, the significance of this move may seem to be more a matter of principle than of practical effect. For, with housing accounting for more than 80 per cent of the GLC's outstanding loan debt (which totalled some £2.2bn at the end of March 1978), the authority will still be one of the country's largest borrowers, needing to raise about £360m a year mostly for re-financing purposes.

Opportunity

The decision was moreover but the final step in a policy which has been gradually evolved by both Labour and Conservative administrations. The large reduction in local Government capital expenditure generally, and the GLC's increasing concentration on the inner city, the Thames barrier, and other investment projects which attract large capital grants, have made it easier for the GLC to move towards 100 per cent internal-financing of non-housing investment.

With this category of investment set to rise again and the GLC's internal capital fund now close to equalling outstanding non-housing debt, its senior financial advisers saw an opportunity which may not recur to redeem all past debt and establish internal funding as a firm rule.

With monetary discipline likely to be tighter in the 1980s—and re-financing costs heavier—than in the 1950s and 1960s, they saw it as a step which it would be prudent for an authority of GLC's size to take. Even if the presumption about future market conditions was wrong, the consequences would not be detrimental to the GLC's—and its ratepayer's—interests. But, if the presumption was right, then funding non-housing investment internally would give the GLC greater flexibility as to timing and form in managing its housing debt.

Internal funding could be said to be prudent in another sense too. With London's population falling (and aggregate rateable values growing hardly at all in real terms), the capital's outstanding local authority debt per head of the population is already 70 per cent above the national average. At the same time, internal funding will give the GLC more freedom from Whitehall. This is because government controls on local authority investment operate not on total spending but take *the form of loan approvals.*

The GLC does not see its funding policy as one that other councils should necessarily follow. But revenue financing of capital spending has risen generally in the last few years *of investment restraint and, if the GLC's example were to be* widely followed, the government would clearly have to review its present methods of control. Although internal funding reduces the PSBR, it under*mines Whitehall's influence on* aggregate local spending.

Explicit

As the Layfield committee pointed out, *an instrument (loan approval)* designed to ensure financial probity is not an appropriate macro-economic weapon. The committee recommended its replacement with a control operating directly on the proportion of internal funding, as part of a radically overhauled grant system based upon unitary grant lines. Most councils are against the unitary grant as it would make explicit their responsibility for above or below average spending in relation to assessed needs. But it could well come — together with a replacement for loan approvals if more of them were to go in for internal funding.

Preparing for a late summer lift

GARDENS TODAY

BY ROBIN LANE FOX

THIS MAY seem an odd moment to be busy with ordering flower-bulbs and tubers. I have only just seen my first crocus. It does not look too pleased with itself after the long affliction of the cold winter. But we all have to keep one step ahead of the game. Your thoughts should be in June and July at the moment, not on the Mediterranean but back in the flower-beds where you are bound to be troubled with gaps and losses after rough weather.

Reliable buys

If you want to make them up cheaply with all annual flowers, get a move on. *The longer you* grow some of these tall varieties, the better-branched they will be, especially if you move a few into pots as I described some weeks back. Remember that there are a few perennial border plants which will make a tall show this year. Anchusa, fennel, verbascum and the hollyhock are reliable buys, whereas plants like phlox or rudbeckia will need a year or two to be at their best.

If all the elm trees have died, if the next-door farmer has taken out the hedge and the previous owner has stripped you of timber, cheer yourself up with the enormous silver thistle, or onopordon. This plant will only *last for a year if bought now.* But it will soar up to eight feet, branching boldly like a huge candlestick. If you do not like silvery thistles, avoid this, the biggest of them all. A few go a long way, but if you place them well, they can bring a bare garden through those years before the lime trees have reached 12 feet. They have to be staked, though.

Otherwise, turn to the bulb catalogues. Summer bulbs, I often point out, are very good value. They give the garden a lift in late summer. They are often tall, bold and almost too heavily clothed with leaves. Everybody knows the dahlia, though not everybody remem*bers that it came from Mexico* with a Mr. Dahl. So I will concern myself with that.

There are, really, only three things which I want to say. I assume that you will go off and order the tubers promptly. I also assume that you know how to delay planting until late May: you start them off first in boxes of earth which just cover the tubers and stand them in a warm place. But owners of old tubers forget, at times, to check them over in early spring. You may find that some are beginning to shrivel in those well-strawed boxes which took them last November. It is worth checking through for any rot. Throw out any which happen to be soggy. *The complaint will* spread. If they are shrivelling and shrinking, put earth round them now and keep them quite. You should not simply forget them as you may be about to lose the lot.

While checking them out remember that they are the easiest things to divide. Just *cut off a cluster of these small* tubers. One old dahlia should turn into three new ones, at least.

Which, though, are best? I strongly prefer the big starry flowers of the cactus class and the smaller double ones of the pompon to the shaggy double sorts which are generally sold as "decorative." These "decorative" ones are too overpowering for most flower-beds. You can get away with them in a vegetable garden or perhaps in the cottage-garden I touched on last week. But unless your flower-beds are very deep—the flowers are so much heavier than anything else at the time of year—I think they are out of proportion.

The pompons are more appropriate, to my eye. Mix them, for instance, with the big *white daisy-flowers of the shasta* daisy, sold as *Chrysanthemum Maximum.* You have to stake them, but I was impressed last year by a block of pompon black baby, almost true to its name, among a sea of these white *flowers. It is a little over three* feet tall and very dark maroon. Black and white are a pair of colours which gardeners, too, would do well to cultivate. This pair in August and September were most striking. For the rest, I have been pleased with a tall canary yellow called potgieter over the years. Beware of the orange, and salmon-roses. They cover some unusable colours. A white called doxy is good, if you do not have too much white in autumn already.

The cactus varieties are particularly fine when used as cut flowers. The least promising colours come to life in a vase. But it is also worth hunting out named varieties, even at 40p a time. Remember that you can split them. De Jager of Marden, Kent will sell you two superb ones, the snow white polar sight whose petals are prettily curled and twisted and the pure scarlet bacchus, a very fine true colour. Each is about *four* feet tall.

Park-bedding

Among tall yellows, pioneer has taken the prizes, not undeservedly. Watch out for a long-stemmed one called promise which is a good cut-flower and also has nicely parted petals. *I was bowled over last year by* a park-bedding display of de Jager's small border princess. This is a mere two feet high, small-flowered and that shade of copper-blush pink which is otherwise best found in a chrysanthemum. *I* think it would also work in a private garden. For a long season and a clear white, go for highness, a reliable companion to the fancy polar sight.

From experience, I prefer these fine varieties to the bags sold as bargains in chain stores in late spring. Breeders have gone wild with the dahlia, so it is stupid to ignore their recent results. If you buy anything, *buy the best. At a lower height,* I will only repeat my yearly favour for the mixed collarette sorts, the ones with a yellow centre and an outer ring of darker petals. The more we see of these, the better.

They are far more impressive than the little mignon and topmix sorts which breeders have been proud to produce. De Jager's, again, will sell them, but not in named colours. I *hope they will draw more atten*tion. Everybody always notices mine, the best late autumn bedding varieties at a height of two feet. But you will have to order them as they are a minority taste. Hence my nudging this week: now is the time to be busy with the lists.

The single-leafed dahlia—a delight in the garden—you need to place your orders now for planting in May

Tragus in bid for fifth win

RACING

BY DOMINIC WIGAN

IN SPITE of the absence of Dramatist, this afternoon's Surrey Novices' Chase over two miles at Lingfield has the makings of an absorbing race. Tragus, unbeaten in four outings this term, *will be conceding weight to eight opponents,* including Roller Coaster, Sweeping Along and Sweet September.

David Morley's top weight, something of a course specialist here with two victories over today's two-mile strip to his credit, has not been hard-pressed in any race.

A ten-lengths winner at Nottingham and Fontwell in December, the Bury St. Edmonds recruit to chasing won even more easily when completing a quick double on the Sussex track early in January. Maintaining a relentless gallop after forging into the lead at the fourth in the Warburton Novices Chase, Tragus drew further ahead of Gale Forecast and at the line was 25 lengths ahead of Mrs. Diane Oughton's *chaser, to whom he was conceding* 21 lbs.

In his only race since then, Tragus gave the former champion, Bob Davies, another armchair ride when completing a course hat-trick in the Peter *Duncanson Memorial* Trophy over 2¼ miles. Making his own running, Tragus won through a severe forcing pace, never being in danger from his hard-ridden Uplands rival, Roller Coaster, after opening up a big gap half *a mile from home.*

Although the form of that race indicated he would have no difficulty confirming superiority over Roller Coaster when on worse terms by only a pound in weight, I shall be surprised if that proves to be the case. For in addition to the fact that Roller Coaster (disqualified after gaining a narrow hurdles victory first time out) was making his debut over fences, it could be that the 2¼ miles in extremely testing conditions was beyond the six-year-old.

In what could prove to be the most intriguing event on the *Jackpot-supported programme,* I shall be taking a chance on Roller Coaster, a respectable fourth behind Dramatist at Newbury on his only subsequent appearance, springing a surprise.

But Morley should maintain his good percentage here through Sabroso in the Godstone Chase an hour later.

Steve Cauthen, who was rumoured to be receiving a retainer in the region of £200,000 *from Robert Sangster for riding* in Europe next season, will be receiving about a quarter of that amount.

LINGFIELD

2.00—Norfolk Downs**
2.30—Alpenstock
3.00—Roller Coaster***
3.30—Come Play With Me
4.00—Sabroso*
4.30—Rube's Wicket

ENTERTAINMENT GUIDE

OPERA & BALLET

COLISEUM. Credit cards. 01-240 5258. Reservations 01-836 3161. ENGLISH NATIONAL OPERA Winners 1978 SWET Award Outstanding Achievement in Opera. Tonight and Sat. 5.30 Siegfried (final perfs.). Tomor. 7.30 Dido and Aeneas/Les Mamelles de Tirésias (final perf.). Fri. 7.00 Carmen. 104 balcony seats avail. for all perfs. from 10.00 on day of perf. There will be no performances at the London Coliseum between March 5 and April 3.

COVENT GARDEN CC 240 1066 (Gardencharge Credit Cards 836 6903) THE ROYAL BALLET Ton't 7.30, Sat. 2.00 and 7.30 Romeo and Juliet. Tomor. 7.30 Enigma Variations, Symphonic Variations, The Concert. Tue. 7.30, Swan Lake. THE ROYAL OPERA Fri. 7.30 Die Zauberflöte. Mon. 7.30 Billy Budd. 65 Amphi seats avail. for all perfs. from 10 am on day of perf.

DOMINION, Tottenham Ct. Rd. 580 9562. LONDON FESTIVAL BALLET Evgs. 7.30. Mat. Sats. 2.30. Mar. 5 to 17 ROSALINDA. New comedy ballet music by J. Strauss. Mar. 19 to 27 Nureyev's production of Tchaikovsky's The Sleeping Beauty. Mar. 28 to 31 Les Sylphides, Petrouchka, Prince Igor.

SADLER'S WELLS THEATRE. Rosebery Ave., EC1. 837 1672. Mar. 13 to 17. IRAQI NATIONAL DANCE COMPANY

THEATRES

ADELPHI THEATRE. 01-836 7611. Evgs. 7.30. Mats. Thurs. 3.00. Sat. 4.00. (Seats from £1 at doors) IT'S GREAT ENTERTAINMENT! IT'S SPECTACULAR! IT HAS WONDERFUL SONGS! BEYOND THE RAINBOW LONDON'S HAPPIEST MUSICAL Over 125 perfs. Now Booking to Sept.

ALBERY. From 8.30 a.m. 836 3878. CC. Bkgs. 836 1071-3. Party rates. Evgs. 7.45. Thurs. and Sat. 4.30, 8.00. "A THOUSAND TIMES WELCOME IS LIONEL BART'S" "MIRACULOUS MUSICAL" Fin. Times. OLIVER with ROY HUDD GILLIAN BURNS MARGARET BURTON CHILDREN'S HALF-PRICE OFFER DAY OF PERF. NOW BOOKING TO 1980.

ALDWYCH. 836 6404. Info 836 5332. ROYAL SHAKESPEARE COMPANY IN repertoire. Ton't, tomor. 7.30, last two perfs. Middleton & Rowley's THE CHANGELING "A momentous evening's theatre." Time Out. With: AS YOU LIKE IT (Fri., Sat. m&e). Bronson Howard's comedy SARATOGA (Mon., Tue.). New bkg. for final perfs. Coriolanus from 14 March. RSC also at THE WAREHOUSE (see under W).

AMBASSADORS. CC. 01-836 1171. Evgs. 8.00. Tues. 2.45. Sats. 5.00, 8.00. JAMES BOLAM "A superb performance." FT. GERALD FLOOD in A NEW THRILLER WHO KILLED "AGATHA" CHRISTIE "Best since Sleuth." N. Statesman.

ARTS THEATRE. 01-836 2132. TOM STOPPARD'S DIRTY LINEN "Hilarious ... see it." Sunday Times. Mon. to Thursday 8.30. Friday and Saturdays 7.00 and 9.15.

ASTORIA THEATRE. CC. Charing Cross Rd. 734 4291 or 439 8031. Mon.-Thurs. 8.00 pm. Fri. and Sat. 6.00 and 8.45. ELVIS BEST MUSICAL OF 1977 EVENING STANDARD AWARD Group bookings 01-437 3856.

CAMBRIDGE. 01-836 6056. S.O. also open Sundays: Credit Cards 01-836 7040. Red. price Previews from March 30 Mon-Thurs 8.0. Fri and Sat 5.0 and 8.30. OPENS APRIL 10 at 7.0 CHICAGO THE HIT BROADWAY MUSICAL Group Bookings: 01-437 3856.

CRITERION. From 8.30 am 930 3216. CC bkgs. 836 1071. Evs. Mon. to Thurs. 8.00. Fri. and Sat. 5.45 and 8.30. BEST COMEDY OF THE YEAR Evening Standard Drama Awards GLOO JOO "Michael Hastings's quick-witted farce on how to become a legal immigrant in one easy wedding." Observer. "THE MOST HILARIOUS PLAY FOR YEARS." Financial Times.

DRURY LANE. CC. 01-836 8108. Mon-Sat. 8.00. Mats. Wed. and Sat. 3.00. A CHORUS LINE "A rare, devastating, joyous, astonishing stunner." Sunday Times. LAST FIVE WEEKS

DUCHESS. 836 8243. Mon. to Thurs. Evgs. 8.00. Fri. and Sat. 5.30 and 8.15. "The nudity is stunning." Daily Tel. OH! CALCUTTA! Ninth Sensational Year

DUKE OF YORK'S. CC. 01-836 5122. Evenings 8.00 pm. Mats. Thurs. 3.00 pm. Sat. 5.30, 8.30. TOM COURTENAY FELICITY KENDAL CLOUDS "IS BLISS." Observer. "MICHAEL FRAYN'S FUNNIEST PLAY." Daily Telegraph.

FORTUNE 836 2238. Evgs. 8.00. Thurs. 3.00. Saturdays 5.00 and 8.00. AGATHA CHRISTIE'S MURDER AT THE VICARAGE FOURTH GREAT YEAR

GARRICK. CC. 01-836 4601. Evs. 8.00 (sharp). Wed. 3.00. Sat. 5.30 and 8.30. DENIS QUILLEY in IRA LEVIN'S DEATH TRAP New Thriller "THREE CHEERS FOR TWO HOURS OF VERY INGENIOUS, VERY FUNNY, MARVELLOUS ENTERTAINMENT." S.Tel. "VERY EXCITING." Fin. Times.

GLOBE THEATRE. CC. 01-437 1592. Reduced price Preview Mar. 6, 8.15. Opening March 7 at 7.00. ALISON STEADMAN CHRISTOPHER CAZENOVE in ALAN AYCKBOURN'S New Comedy JOKING APART

GLOBE THEATRE. CC. 01-437 1592. Evgs. 8.15. Wed. 3.00. Sat. 6.00, 8.40. PAUL EDDINGTON, JULIA MACKENZIE BENJAMIN WHITROW in Alan Ayckbourn's comedy TEN TIMES TABLE LAST WEEK. ENDS SATURDAY.

GREENWICH THEATRE. 01-858 7755. Tst. 7.0. Sub. evgs. 8.0. Mat. Sat. 2.30. LEONARD ROSSITER in SEMI-DETACHED

HAYMARKET. 01-930 9832-9833. Evgs. 8.00. Wed. 2.30. Sat. 4.30, 8.00. PENELOPE KEITH NIGEL HAWTHORN CHARLES KAY ANGHARAD REES and IAN OGILVY in THE MILLIONAIRESS by BERNARD SHAW LAST WEEK, MUST END SAT.

HAYMARKET. 01-930 9832. Prevs. from Mar. 12. Evgs. 8.0. Wed. 2.30. Opens Mar. 15 at 7.0, subs. 8.0. Wed. 2.30. Sat. 4.30 and 8.0. KEITH MICHELL SUSAN HAMPSHIRE in the new SHERLOCK HOLMES MYSTERY THE CRUCIFER OF BLOOD by PAUL GIOVANNI

KING'S HEAD. 226 1916. Dinner 7.30. Show 8.30 THE ERPINGHAM CAMP by Joe Orton. "Full of comic invention." Fin. Times. LAST WEEK.

KING'S ROAD THEATRE. 01-352 7488. Monday to Thursday 9.00. Friday and Saturday 7.30 and 9.30. THE ROCKY HORROR SHOW DON'T DREAM IT, SEE IT LAST FIVE WEEKS

LYRIC THEATRE. CC. 01-437 3686. Evgs. 8.00. Thurs. 3.00. Sat. 5.00, 8.30. BARBARA JEFFORD FRANK FINLAY FILUMENA by Eduardo de Filippo. Directed by FRANCO ZEFFIRELLI. Society of West End Theatre Award COMEDY OF THE YEAR "TOTAL TRIUMPH." Evg. News. "AN EVENT TO TREASURE." D. Mir. "MAY IT FILL THE LYRIC FOR A HUNDRED YEARS." Sunday Times.

MAYFAIR. 629 3036. 493 2031 (Green Park Tube). Mon.-Fri. 8.30. Sat. 6.15 and 8.45. Preview 13th red. prices 14th 7.30. TONY SELBY, DAVID DIXON FLASHPOINT by Tom Kempinski. Directed by Anton Rodgers. "A tense yet comic drama —How would you have reacted—"

NATIONAL THEATRE. 928 2252. OLIVIER (open stage): Fri. and Sat. 7.30 (low price prevs.) THE FRUITS OF ENLIGHTENMENT, a comedy by Tolstoy trans. Michael Frayn. LYTTELTON (proscenium stage): Today 3 (low price mat.), Tonight & Tomorrow 7.45 THE PHILANDERER by Shaw. COTTESLOE (small auditorium): Tonight & Tomorrow 8 THE LONG VOYAGE HOME by Eugene O'Neill. Many excellent cheap seats all 3 theatres day of perf. Car park. Restaurant 928 2033. Credit card bookings 928 3052.

OLD VIC THEATRE. 01-928 7616. Young Vic Company in Shakespeare's Trilogy directed by Michael Bogdanov. RICHARD III today 7.30, Thurs. 3 pm. HAMLET Thurs. 7.30. TEMPEST Fri. 7.30.

OLD VIC. 01-928 7616. Young Vic Company in Shakespeare's Trilogy directed by Michael Bogdanov. Ton't 7.30, Tomor. 3, RICHARD III. Tomor. 7.30 HAMLET. Fri. 7.30 TEMPEST.

OPEN SPACE. 387 6969. Tues. to Sun. 8. BRIMSTONE AND TREACLE by Dennis Potter. "Deeply fascinating." Guardian. [illegible] Standard.

PALACE. 01-437 6834. Mon.-Thurs. 8.00. Fri. and Sat. 6.00, 8.40. JESUS CHRIST SUPERSTAR by Tim Rice and Andrew Lloyd-Webber.

PALLADIUM. March 26 for 7 perfs only. Monday 7.30. Tues. and Thurs. 8.00. Wed. and Fri. 6.15 and 8.45. The One and Only BOB HOPE With Singing/Dancing Sensation from USA LESLIE UGGAMS BOOK NOW. 01-437 7373.

PALLADIUM. CC. 01-437 7373. Twice Daily 2.45 and 7.30. DANNY LA RUE as "Merry" Widow Twankie in ALADDIN ALFRED MARKS as ABANAZAR Dilys WATLING, Brian MARSHALL and WAYNE SLEEP. "One of the best-dressed and funniest pantos to be staged at the Palladium for years." D. Mir. SEATS AVAIL. FOR TODAY'S PERFS.

PICCADILLY. From 8.30 am. 437 4506. Credit Card bookings 836 1071. Mon.-Fri. at 8.00. Sats. 5.15 and 8.15. A NIGHT WITH DAME EDNA and a handful of cobbers Starring the annoyingly successful BARRY HUMPHRIES DAME EDNA GRACIOUSLY EXTENDS HER SEASON TO APRIL 28.

PRINCE EDWARD. CC. 01-437 6877. Evenings 8.00. Mat. Thurs., Sat. 3.00. EVITA by Tim Rice and Andrew Lloyd-Webber. Directed by Harold Prince.

PRINCE OF WALES. 01-930 8681. Credit card bookings 930 0846. Mon. to Thurs. 8.00. Fridays and Sat. 6.00 and 8.45. ALAN AYCKBOURN'S smash-hit comedy BEDROOM FARCE "If you don't laugh, sue me." D. Exp. A National Theatre Production.

PHOENIX THEATRE. CC. 01-836 2294. Evs. 8.00. Wed. 3.00. Sat. 5.00 and 8.30. JOHN THAW in NIGHT AND DAY A new play by TOM STOPPARD Directed by PETER WOODS BEST PLAY OF THE YEAR Evening Standard Drama Award

QUEEN'S. CC. 01-734 1166. Evgs. 8.00. Fri. and Sat. 6.00 and 8.45. MAGICAL TOMMY "A DREAM OF A SHOW." E. News. by PETE TOWNSHEND and THE WHO A ROCK MUSICAL with ALLEN LOVE, PETER STRAKER ANNA NICHOLAS and BOB GRANT.

RAYMOND REVUEBAR. CC. 01-734 1593. At 7.00, 9.00, 11.00 pm. Opens Sunday. PAUL RAYMOND presents THE FESTIVAL OF EROTICA. Fully air-conditioned. 21st SENSATIONAL YEAR

ROYAL COURT. 730 1745. Mon.-Fri. 8.00, Sats. 5.0 & 8.30. THE LONDON CUCKOLDS Edward Ravenscroft's Restoration Farce

ROYALTY. CC. 01-405 8004. Monday-Thursday evenings 8.00. Friday 5.30 and 8.45. Saturday 3.00 and 8.00. BUBBLING BROWN SUGAR NOW IN ITS 2nd GREAT YEAR. Book by Tel. for the entire family. Easy parking.

SAVOY THEATRE. 01-836 8888. Credit Cards 01-734 4772. TOM CONTI ACTOR OF THE YEAR West End Theatre Award in PLAY OF THE YEAR WHOSE LIFE IS IT ANYWAY? by Brian Clarke. "A momentous play, I urge you to see it." Gdn. Evs. 8.00. Sat. 5.45 and 8.45. Red. price mats. Wed. 3.

STRAND. 01-836 2660. Evenings 8.00. Mats. Thurs. 3.00. Sats. 5.30 and 8.30. NO SEX PLEASE— WE'RE BRITISH LONDON'S BIGGEST LAUGH OVER 3,000 PERFORMANCES

ST. MARTIN'S. CC. 01-836 1443. Evgs. 8.00. Matinees Tues. 2.45. Sats. 5.00 and 8.00. AGATHA CHRISTIE'S THE MOUSETRAP WORLD'S LONGEST-EVER RUN 27th YEAR.

TALK OF THE TOWN. CC. 01-734 5051. Air-conditioned. From 8.00. Dining and Dancing 9.30. SUPER REVUE RAZZLE DAZZLE at 11.00 MARC ANTHONY.

THEATRE UPSTAIRS. 730 2554. Mon.-Fri. 7.30. Sat. 7.30 and 9.30. WINSTON NTSHONA in FULL FRONTAL by Michael Hastings.

VAUDEVILLE. CC. 01-836 9988. LIMITED SEASON FINISHES SAT. LAST WEEK. Evenings at 8.00. ASPECTS OF MAX WALL AN EVENING OF LAUGHTER "Come strike, rain or public transport while Max Wall is in London there is nowhere else I would rather be." D. Mail. "A TREASURE TROVE OF THE COMEDIAN'S ART. A UNIQUE AND DELIGHTFUL EXPERIENCE IN THE COMPANY OF OUR GREATEST VAUDEVILLIAN." FT. "Two hours of sheer delight." S. People.

VAUDEVILLE. 836 9988. Mar. 5-10. Returning to the West End for EIGHT PERFORMANCES ONLY. Evgs. 8.00. Mats. Wed. and Sat. 2.45. MARGARET RAWLINGS in EMPRESS EUGENIE by Jason Lindsey. Directed by Marianne Macnaghten. "Enchanting ... A Royal triumph." S.N. "A TRULY LOVELY PERFORMANCE." FT. "THIS GLORIOUS PERFORMANCE A THEATRICAL TRIUMPH." Gdn.

VAUDEVILLE. 836 9988. BOOK NOW. OPENS MARCH 15 at 8 pm. sub evs. 8.00. Wed. 2.45. Sat. 5.00 & 8.00. JEAN KENT & JOYCE CAREY "as Miss Marple" A MURDER IS ANNOUNCED by AGATHA CHRISTIE

VICTORIA PALACE. CC. 01-828 4735-6. 01-834 1317. Evgs. 7.30. Mats. Wed. and Sat. 2.45. SHEILA HANCOCK ANNIE "BLOCKBUSTING SMASH-HIT MUSICAL." Daily Mail. Best Musical of the Year 1978 Evg. Stand. Drama & Plays & Players Awards.

WAREHOUSE. Donmar Theatre, Covent Garden. Box Office 836 6808. Royal Shakespeare Co. Ton't, tomor. 8.00 final perfs. Mary O'Malley's LOOK OUT ... HERE COMES TROUBLE! "Wildly funny" D. Mail. All seats £1.80. Student standby £1. Adv. bkgs. Aldwych.

WHITEHALL. CC. 01-930 6692-7765. Monday to Thurs. 8.00. Matinees Fri. and Sat. 6.15 and 8.45. IPI TOMBI The African Musical Explosion. A pulsating riot of Dance and Song. FOURTH GREAT YEAR.

WINDMILL THEATRE. CC. 01-437 6312. Twice Nightly. 8.00 and 10.00. Sunday 6.00 and 8.00. PAUL RAYMOND presents RIP OFF THE EROTIC EXPERIENCE OF THE MODERN ERA. Now showing new second edition. New girls, new acts, new production.

WYNDHAM'S. From 8.30 a.m. 01-836 3028. Credit card bkgs 836 1071. Mon. to Thurs. 8.00. Fri. and Sat. 5.15, 8.30. "ENORMOUSLY RICH" Mary O'Malley's smash-hit comedy. "VERY FUNNY." Evening News. ONCE A CATHOLIC "Surefire comedy of sex and religion." D. Tel. "MAKES YOU SHAKE WITH LAUGHTER." Guardian.

YOUNG VIC. 928 6363. Ton't 7.45. Thur 7.00. Subs. 7.45. Until Mar. 17 Oxford Playhouse Co. in Nigel Williams' controversial play CLASS ENEMY, 1978 Plays & Players' Playwright of the Year. (See under OLD VIC.)

CINEMAS

ABC 1 & 2, Shaftesbury Ave. 836 8861. Sep. perfs. All seats bookable. 1: THE DEER HUNTER (X). Wk. & Sun. 2.15, 7.30. 2: SUPERMAN (A). Wk. and Sun. 2.00, 5.00, 8.10. Both cinemas closed tomorrow.

CAMDEN PLAZA (opp. Camden Town Tube) 485 2443. Oshima's EMPIRE OF PASSION (X). Progs. 2.25, 4.30, 6.45, 9.10. 7th week.

CLASSIC 1, 2, 3, Haymarket (Piccadilly Circus Tube). 01-839 1527. 1: Elliott Gould, James Brolin, CAPRICORN ONE (A). Cont. from 1 pm. 2: THE HILLS HAVE EYES (X). Peter Beckworth, MR. SMITH (X). Cont. from 1.15 pm. 3: Jacqueline Bisset, George Segal TOO MANY CHEFS (A). Cont. from 12.45 pm.

CLASSIC 1, 2, 3, 4, Oxford Street. 636 0310 (Opp. Tottenham Court Rd. Tube). 1: THE HILLS HAVE EYES (X). Peter Beckworth, MR. SMITH (X). Cont. from 1 pm. 2: Final Days! SGT. PEPPER'S LONELY HEARTS CLUB BAND (U). Cont. from 1.15 pm. 3: THE CHANT OF JIMMY BLACKSMITH (X). Cont. from 1.15 pm. 4: Clint Eastwood EVERY WHICH WAY BUT LOOSE (AA). Cont. from 1.20 pm.

CLASSIC, Leicester Square. 01-930 6915. THE HILLS HAVE EYES (X). Peter Beckworth, MR. SMITH (X). Cont. from 1.30 pm.

CURZON, Curzon Street, W1. 499 3737. ISABELLE HUPPERT in CHABROL'S VIOLETTE NOZIERE (X) (English subtitles). Showing at 1.15 (not Sun.), 3.40, 6.05 and 8.30.

LEICESTER SQUARE THEATRE (930 5252) DAMIEN OMEN II (X). Sep. progs. 1.10, 4.40, 8.10. All seats bkble. at Box Office or by post for 8.10 prog. Last day.

ODEON, Haymarket. (930 2738-2771) MAGIC (X). Sep. perfs. Wks. 2.15, 5.15, 8.15. All seats bkble. at Box Office or by post.

ODEON, Leicester Square. (930 6111.) ASHANTI (AA). Sep. progs. Daily, doors open 1.45, 4.45, 7.45. All seats bkble at Box Office or by post. From March 20, Neil Simon's CALIFORNIA SUITE (AA). All seats bkble. BOX OFFICE NOW OPEN.

ODEON, Marble Arch. W2 (723 2011-2) Farrah Fawcett-Majors, Jeff Bridges in SOMEBODY KILLED HER HUSBAND (A). Sep. progs. Wks. doors open 2.15, 5.00, 8.00.

PRINCE CHARLES, Leic. Sq. 01-437 8181. IN PRAISE OF OLDER WOMEN (X). Sep. perfs. dly. (inc. Sun.) 12.40, 3.10, 5.55, 8.35. Late show Nightly 11.15. Seats bkble. Lic'd Bar.

STUDIO 1, 2, 4, Oxford Circus. 437 3300. 1: An all-star cast in Robert Altman's A WEDDING (AA). Progs. 2.20, 5.10, 7.55. Late Show Sat. 10.45 pm. 2: Agatha Christie's DEATH ON THE NILE (A). Progs. 2.30, 5.25, 8.10. Late Show Sat. 10.40. 4: THE DEER HUNTER (X). Sep. Perfs. Dly. 12.30, 4.05, 7.40. Lte. Show Sat. 11.20. Seats bkble.

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† Indicates programme in black and white

BBC 1

7.05-7.55 am Open University (Ultra high frequency only). 9.38 For Schools, Colleges. 10.45 You And Me. 11.00 For Schools, Colleges. 12.45 pm News. 1.00 Pebble Mill. 1.45 Fingerbobs. 2.01 For Schools, Colleges. 3.53 Regional News for England (except London). 3.55 Play School. 4.20 Touché Turtle. 4.25 Jackanory. 4.40 Take Hart. 5.00 John Craven's Newsround. 5.05 Graham's Gang. 5.35 Noah and Nelly.

5.40 News.
5.55 Nationwide (London and South-East only).
6.20 Nationwide.
6.45 Noel Edmonds' Lucky Numbers.
7.35 Morecambe and Wise at the BBC.
8.10 Mastermind International.
9.00 News.
9.25 The Risk Business: On what basis are the rail*ways being run?*
10.05 Sportsnight.
11.00 Tonight from Madrid.
11.40 Weather/Regional News.

All Regions as BBC-1 except at the following times:—

Scotland—11.00-11.20 am and 2.18-2.38 pm *For Schools.* 5.55-6.20 Reporting Scotland. Between 10.15 and 11.10 The Cutty Sark Scottish Curling Championship (highlights). 11.50 Referendum Report. 12.00 News and Weather for Scotland.

Wales—2.18-2.38 pm I Ysgolion. 5.05-5.35 Bilidowcar. 5.55-6.20 Wales Today. 6.45 Heddiw. 7.05-7.35 Florida. 11.50 The Hound of Heaven. 12.20 am News and Weather for Wales.

Northern Ireland—3.53-3.55 pm Northern Ireland News. 5.55-6.20 Scene Around Six. 11.50 News and Weather for Northern Ireland.

England—5.55-6.20 pm Look East (Norwich); Look North (Leeds, Manchester, Newcastle); Midlands Today (Birmingham); Points West (Bristol); South Today (Southampton); Spotlight South-West (Plymouth).

BBC 2

6.40-7.55 am Open University.
10.20 Gharbar.
10.45 Parosi.
11.00 Play School.
4.50 pm Open University.
6.55 Frankie Vaughan in Profile.
7.40 Mid-evening News.
7.50 The World of Rugby.
8.15 The Money Programme. Devolution in Wales and Scotland (views of businessmen).
9.00 M*A*S*H.
9.25 The Devolution Debate.
11.15 My Kind of Movie: Marjorie Proops on "Breakfast at Tiffany's."
11.20 Late News.
11.35 Arena: Cinema.

LONDON

9.30 am Schools Programme. 12.00 Cloppa Castle. 12.10 pm Rainbow. 12.30 The Cedar Tree. *1.00 News, plus FT Index.* 1.20 Thames News. 1.30 Crown Court. 2.00 *After Noon Plus.* 3.20 Kitchen Garden. 3.50 Letter by Letter. 4.20 How. 4.45 Park Ranger. 5.15 Little Vic.

5.45 News.
6.00 Thames at 6.
6.25 Help!
6.35 *Crossroads.*
7.00 This Is Your Life.
7.30 Coronation Street.
8.00 Leave It To Charlie.
8.30 Take My Wife.
9.00 Mickey Duff: Matchmaker.
10.00 News.
10.30 Showjumping.
11.30 Guinness Golden Darts.
12.00 What The Papers Say.
12.15 am Close: Jo Maxwell Muller reads an Old Testament story.

All *IBA Regions as London* except at the following times:—

ANGLIA

1.25 pm Anglia News. 2.00 Houseparty. 2.25 Family. 5.15 Mr. and Mrs. 6.00 About Anglia. 11.30 The Company Men. 12.30 am The Big Question.

ATV

1.20 pm ATV Newsdesk. 5.15 The Rolf Harris Show. 6.00 ATV Today. 11.30 Twist in the Tale.

BORDER

1.20 pm Border News. 2.00 Houseparty. 2.25 Family. 5.15 The Rolf Harris Show. 6.00 Lookaround Wednesday. 11.30 The Practice. 11.55 Border News Summary.

CHANNEL

1.18 pm Channel Lunchtime News and What's On Where. 2.25 Family. 5.15 Emmerdale Farm. 6.00 Channel News. 6.15 The Funky Phantom. 10.28 Channel Late News. 11.30 Barnaby Jones. 12.20 am Epilogue followed by news and weather in French.

GRAMPIAN

9.25 am First Thing. 1.20 pm Grampian News Headlines. 5.15 Emmerdale Farm. 6.00 Grampian Today. 11.30 George Hamilton IV. 12.00 Reflections. 12.05 am Grampian Late Night Headlines.

GRANADA

1.20 pm Dodo. 2.00 Live from 2. 5.10 Max the 2,000 Year-Old Mouse. 5.15 *Crossroads.* 6.00 *Granada Reports.* 6.30 Give Us A Clue. 11.30 What The Papers Say. 11.45 The Practice.

HTV

1.20 pm Report West Headlines. 1.25 Report Wales Headlines. 5.20 Crossroads. 6.00 Report West. 6.15 Report Wales. 6.30 Emmerdale Farm. 11.30 Barnaby Jones.

HTV Cymru/Wales—As HTV General Service except: 1.20-1.25 pm Penawdau Newyddion y Dydd. 4.20-4.45 'Rydw i Am Fod ... 6.00-6.15 Y Dydd. 10.30-12.30 am "Don Pasquale" HTV's production of Donizetti's "Don Pasquale" centres on the performance given by Sir Geraint Evans. It is sung in Italian with Welsh subtitles.

HTV West—As HTV General Service except: 1.20-1.30 pm Report West Headlines. 6.15-6.30 Report West.

SCOTTISH

1.25 pm News and road and weather. 5.15 Teatime Tales. 5.20 Crossroads. 6.00 Scotland Today. 6.30 Best of Weir. 9.00 Referendum '79. 11.30 Late Call. 11.35 Love Story.

SOUTHERN

1.20 pm Southern News. 2.00 Houseparty. 2.25 Young Ramsay. 5.15 Sinbad Junior. 5.20 Crossroads. 6.00 Day By Day. 6.20 Scene Midweek (South East Area Only). 6.45 Dick Barton—Special Agent. 11.30 Southern News Extra. 11.40 The Electric Theatre Show.

TYNE TEES

9.25 am The Good Word followed by North East News Headlines. 1.20 pm North East News and Where The Jobs Are. 5.15 Laverne and Shirley. 6.00 Northern Life. 11.30 Police Surgeon. 12.00 Epilogue.

ULSTER

1.20 pm Lunchtime. 2.25 The Electric Theatre Show. 2.55 Untamed World. 4.18 Ulster News Headlines. 5.15 Cartoon Time. 5.20 Crossroads. 6.00 Good Evening Ulster. 11.30 Bedtime.

WESTWARD

12.27 pm Gus Honeybun's Birthdays. 1.20 Westward News Headlines. 2.25 Family. 5.15 Emmerdale Farm. 6.00 Westward Diary. 10.28 Westward Late News. 11.30 Barnaby Jones. 12.20 am Faith For Life. 12.25 West Country weather, shipping forecast.

YORKSHIRE

1.20 pm Calendar News. 5.15 Mr. and Mrs. 6.00 Calendar (Emley Moor and Belmont editions). 11.30 Electric Theatre Show.

Radio Wavelengths

1 1053kHz/285m 1089kHz/275m	3 1215kHz/247m & 90-92.5vhf stereo	BBC Radio London: 1458kHz, 206m & 94.9vhf
2 693kHz/433m 909kHz/330m & 88-91vhf stereo	4 200kHz/1500m & 92-95vhf	Capital Radio: 1548kHz, 194m & 95.8vhf
		London Broadcasting: 1151kHz, 261m & 97.3vhf

RADIO 1

(S) Stereophonic broadcast
‡Medium Wave

5.00 am As Radio 2. 6.00 Dave Lee Travis. 9.00 Simon Bates. 11.31 Paul Burnett. 2.00 pm Mike Read. 4.31 Kid Jensen. 7.00 Radio 1 Mailbag. 8.00 Andy Peebles. 9.50 Newsbeat. 10.00 John Peel (S). 12.00-5.00 am As Radio 2.

RADIO 2

5.00 am News Summary. 5.02 Tony Brandon (S). 7.32 Terry Wogan including 8.27 Racing Bulletin and 8.45 Pause for Thought (S). 10.03 Jimmy Young (S). 12.15 pm Waggoners' Walk. 12.30 Pete Murray's Open House (S). 2.30 David Hamilton (S). 4.30 Waggoners' Walk. 4.45 Sports Desk. *4.47 Ray Moore (S). 6.45 Sports Desk.* 7.02 Robin Richmond (S). 7.30 Listen to the Band (S). 8.15 The Magic of the Musicals (S). 9.02 The Impresarios. 9.55 Sports Desk. 10.02 The Grumbleweeds. 10.30 Gareth Edwards says Be My Guest. 11.02 Sports Desk. 11.05 Brian Matthew introduces Round Midnight including 12.00 News. 2.02-5.00 am You and the Night and the Music with Bill Rennells (S).

RADIO 3

‡6.55 am Weather. 7.00 News. 7.05 Your Midweek Choice, part 1 (S). 8.00 News. 8.05 Your Midweek Choice, part 2 (S). 9.00 News. 9.05 This Week's Composer. Bridge (S). 9.55 Music for Organ (S). 10.30 Three *Bachs concert (S).* 11.20 Midday Concert, part 1 (S). 12.00 In Short (talk). 12.10 pm Midday Concert, part 2 (S). 1.00 News. 1.05 Concert Hall (S). 2.00 Symphonies From The New World (S). 3.00 The Shostakovich Quartets (S). 3.55 Finnish Piano Music (S). 4.40 Beethoven chamber music concert (S). 5.10 Young Music Makers (S). 5.25 Homeward Bound (S). ‡5.45 News. ‡5.50 Homeward Bound (continued). ‡6.15 At Home: Concert. 7.10 Gradus ad Parnassum (S). 7.30 BBC Symphony Orchestra concert, part 1 (S). 8.10 Paradise Illustrated: New telling of the old story. 8.40 BBC Symphony Orchestra, part 2 (S). 9.20 Philadelphia—A Habitable City (talk by Peter Shepherd). 9.40 Kurt Sanderling *conducts Tchaikovsky. 10.30 The Arts* Worldwide. 10.50 Mozart's Piano Trios (S). 11.55-12.00 News.

VHF Only—6.00-7.00 am and 5.45-7.10 pm Open University.

RADIO 4

6.00 am News Briefing. 6.10 Farming Today. 6.25 Shipping forecast. 6.30 Today: magazine, including 6.45 *Prayer for the Day. 7.00, 8.00 Today's* News. 7.30, 8.30 News headlines. 7.45 Thought for the Day. 8.45 Fellow-Townsmen. 9.00 News. 9.05 The Living World. 9.35 The Popular Image. 10.00 News. 10.05 Gardeners' Question Time. 10.30 Daily Service. 10.45 Morning Story. 11.00 About Face. 11.45 Listen With Mother. 12.00 News. 12.02 pm You and Yours. 12.27 Tell Me Where It Hurts (S). 12.55 Weather; programme news. 1.00 The World At One. 1.40 The Archers. 1.55 Shipping forecast. 2.00 News. 2.02 Woman's Hour. 3.00 News. 3.05 Afternoon Theatre (S). 3.50 Choral Evensong (S). 4.35 Story Time. 5.00 PM: magazine. 5.50 Shipping forecast. 5.55 Weather; programme news. 6.00 News. 6.30 My Music (S). 7.00 News. 7.05 The Archers. 7.20 Checkpoint. 7.45 Instant Sunshine Go Gardening (S). 8.05 Father Greene's Ash Wednesday Mass: Portrait of an Irish country priest. 8.45 Analysis: Crossroads for Europe. 9.30 Kaleidoscope: Spender at 70. 9.59 Weather. 10.00 The World Tonight. 10.30 The Movie Moguls (S). 11.00 A Book at Bedtime. 11.15 The Financial World Tonight. 11.30 Referendum Report. 12.00 News.

BBC Radio London

5.00 am As Radio 2. 6.30 Rush Hour. 9.00 London Live. 12.03 pm Call In. 2.03 206 Showcase. 4.03 Home Run. 6.10 Look, Stop, Listen. 7.30 Black Londoners. 8.30 In Concert. 10.03 Late Night London. From 12.00—As Radio 2.

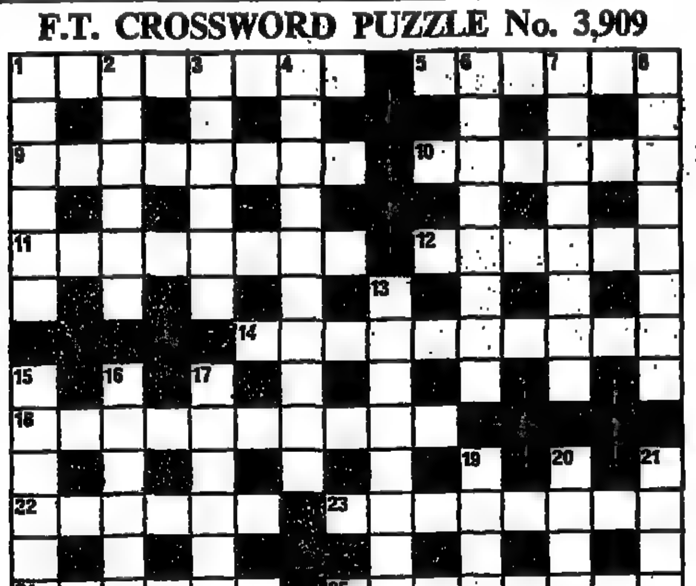
London Broadcasting

5.00 am Morning Music. 6.00 A.M.: news, information, travel, sport. 10.00 Brian Hayes. 1.00 pm LBC Reports. 3.00 George Gale. 4.00 LBC Reports (continues). 8.00 After Eight. 9.00 Nightline. 1.00 am Night Extra.

Capital Radio

6.00 am Graham Dene's Breakfast *Show (S).* 9.00 *Michael Aspel (S).* 12.00 Dave Cash (S). 3.00 pm Roger Scott (S). 7.00 London Today (S). 7.30 Adrian Love's Open Line (S). 9.00 Nicky Horne's Your Mother Wouldn't Like It (S). 11.00 Tony Myatt's Late Show (S). 2.00 am Duncan Johnson's Night Flight (S).

F.T. CROSSWORD PUZZLE No. 3,909



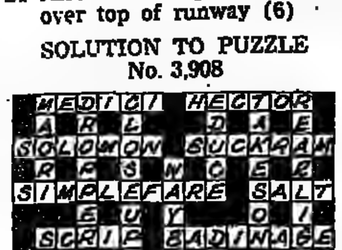
ACROSS

1 Window displaying article in flight (8)
5 What's put on bread for a feast (6)
9 Wrongly sent fish for young bird (8)
10 Doctor changing yens for any currencies (6)
11 Finish with wrath and expose to injury (8)
12 Drink for carrier (6)
14 Mad reason to provide transport (10)
18 Instrument for whetting grates going to north-east (10)
22 Insect the French must follow in delight (6)
23 Article left behind border is barely sufficient (8)
24 First of trucks is corroded but strong and firm (6)
25 Slavonic language to editor is refined (8)
26 Witty answer from distiller (6)
27 Ship going round head of river displaying pennon (8)

DOWN

1 Smoker on a ship (6)
2 I'd pry around at end of game (2-4)
3 Ashore at home to secure (6)
4 Fetch her no change from now on (10)
6 Etiquette shown by professional to colonel (8)
7 Having power to choose ringleader in charge (8)
8 Left claim to reward with editor (8)
13 Where traffic circulates and gives children's rides? (10)
15 Apparatus for stirring a political rabble-rouser (8)
16 Bird with outer coating of pastry (8)
17 Great admirer and I perform afterwards (8)
19 I get in confusion making fire (6)
20 Choral work containing two articles before start of music (6)
21 Aircraft is to pass smoothly over top of runway (6)

SOLUTION TO PUZZLE No. 3,908



FINANCIAL TIMES SURVEY

Wednesday February 28 1979

Airliners

THE NEW GENERATION

Firm orders for more than 700 jet airliners worth over £8.5bn were placed by the world's airlines last year. This trend of re-equipping the civil aviation fleets is expected to add more than 4,000 new airliners throughout the world by the early 1990s.

Orders start to flow

GROWTH IN world civil aviation is now gathering momentum. While estimates for the expansion into the 1980s vary widely, it is generally accepted in the world's airline and aerospace manufacturing industries that passenger traffic is likely to grow at an average of about 7 to 8 per cent a year, with cargo expanding at a slightly higher rate.

This is rather lower than the growth experienced in the mid to late 1960s, but it is nonetheless sufficient to give the world's airlines and aerospace manufacturers some considerable problems, not forgetting also airport owners and other aviation authorities. But the expansion is likely to be patchy, with higher annual growth being experienced in some of the developing countries of the Third World than in the already highly-developed air transport regions of Western Europe and North America, notwithstanding the stimulus to travel being generated in those latter areas by cheaper fares.

One of the reasons for the aviation industry's confidence in continued expansion is that many countries in the Third World have recognised that development of air transport offers one of the quickest routes to economic growth. Another factor is the undoubted expansion in tourism which is taking place worldwide, to the extent that in many countries it has already displaced business travel as the main source of air passenger traffic.

But there could be some constraints on this growth. Fears of a new oil crisis, and higher fuel prices, may damp down some part of the demand. The ability of the world's airlines, aerospace manufacturers and the ground infrastructure to cope with a sustained expansion at this level may itself prove inadequate—for example, as a result of limitations on airport capacity in some countries, and air traffic control and navigational difficulties in others—and this may serve to curb the rate of expansion. The inability of ground-based hotel and transport facilities to cope with ever-increasing numbers of tourists, and even the determination of some countries to restrict the inflow of tourists in a bid to prevent what is already being called "tourist pollution," may also serve to curb the anticipated rate of expansion.

Growth

There may also be industrial and economic difficulties in some countries which will affect air travel development, although it is fair to point out that even in the UK last year, when economic growth as a whole was at a low level, the growth of air passenger traffic at the seven major airports run by British Airports Authority amounted to 15 per cent, or some 40m passengers. But, short of another major international upset such as the oil crisis of late 1973, with its subsequent economic difficulties in many countries, the world aviation industry is confident that the 1980s will see at least a steady expansion in demand for air travel.

Translating this into terms of airliner demand is one of the most difficult tasks confronting the world's aircraft manufacturers. Estimates of airline spending throughout the 1980s vary widely, from about £40bn for about 4,000 airliners of all kinds up to about £60bn for some 6,000 airliners. The emphasis is on the development of new short-to-medium range transports, because it is on the shorter routes that most of the world's airline passengers currently travel, and where the growth is likely to continue to occur, notwithstanding the current expansion on long-haul routes as a result of cheaper fares. The cheap fares "explosion" on short-haul routes is lagging behind that on long-haul routes, and when it comes, as it now shows signs of doing, it may not be so extensive as on the long-haul routes, but still sufficient to encourage a higher rate of expansion than at present.

But it is not just the growth of air travel itself which is creating the demand for the new generation of airliners. The explosion in travel demand has come, fortuitously for the aircraft builders, at a time when one era of civil aviation development—the so-called "first jet age"—is coming to an end, and another is about to begin. For more than 20 years, the first generation jets have served the world's airlines well. But they are now ageing. This in turn coincides with the need both to improve fuel consumption to meet the remorseless rise in fuel prices and costs of all other kinds, and to reduce noise levels to meet increasingly stringent legislative and other controls, imposed by governments in response to intensifying pressures from environmental groups around airports and beneath flight paths.

These environmental pressures have been most intense in the sophisticated air transport regions of Western Europe, North America, Japan and Australasia, but they are now spreading rapidly throughout the world so that the airlines have no alternatives but to buy quieter, and more fuel-efficient, aircraft. Coupled with rising costs in other directions, the inevitable result has been pressure on the manufacturers to study new areas of technology designed to make flying cheaper (or at least to keep pace with rising costs), and to make it quieter. Hence, the new generation of jets, some of them "wide-bodied," such as the European A-300 Airbus, to enable each flight to carry more passengers, but some of them also perpetuating the existing "narrow-bodied" concept, such as the Boeing 757.

Because of the high costs of developing new airliners and engines—roughly anything up to £1bn can be spent on a new wide-bodied engine/airframe combination—the number of new types of engines and airframes emerging is comparatively few, with the emphasis upon seeking evolutionary rather than revolutionary changes in design.

Another significant development is the growth of international collaboration—best evidenced by the partnership of the UK, France, Holland, Spain and West Germany in the European Airbus Industrie consortium, and that between Boeing, Aeritalia of Italy and the Japanese Civil Transport Development Corporation on the Boeing 767 twin-engined "semi-wide-bodied" airliner.

This Survey was written by Michael Donne, Aerospace Correspondent

The emphasis in the new generation of jets is on the short-to-medium haul category. Among the new types already in service on these routes or on the way are the European 230-300-seat A-300 Airbus, and its smaller 200-seat version the A-310, competing with the new U.S. Boeing 767 twin-engined jet; and its smaller partner, the Boeing 757. In the medium-to-long range field, there are comparatively few new developments. Boeing intends to continue evolving its 400-seat 747 Jumbo jet, with plans for new variants to meet a wide range of requirements, while McDonnell Douglas is expected to announce soon plans to "stretch" its DC-10 airliner so as not to leave Boeing with the long-range markets all to itself. Lockheed is also offering the TriStar in a variety of models, but is concentrating on its long-range derivative of the TriStar, the Dash 500.

In the smaller category of medium-to-short-haul jets of the 100- to 150-seat size, where big markets are expected to emerge in the future, Boeing is already dominant with its 727 tri-jet and 737 twin-jet, and it is already studying possible improvements to both models so as to meet any competition that may emerge, for example, from Fokker of Holland, with its planned Super F-28 of up to 130 seats, and the prospective Joint European Transport (JET) programme from Airbus Industrie. Below the 100-seat level, the market remains wide open, with only the four-engined British Aerospace BAe 146 feeder-liner under development, although this is likely to encounter competition from both the Super F-28, and perhaps also from four-engined turbo-propeller feeder-liners like the new Canadian de Havilland Dash Seven, which is steadily carving a niche for itself in world markets.

One feature of the emerging market is a renewed interest in many parts of the world in propeller-driven airliners, not only for fuel economy but also noise reasons. This is enabling manufacturers like Fokker to maintain its F-27 Friendship twin-engined aircraft production line, while British Aerospace is also doing steady business with its Type 748, both of which have been in service for many years.

As with airframes, so with engines. High costs are precluding more than a handful of new developments, and here also the emphasis is on evolution, rather than revolution, with the major manufacturers — Rolls-Royce, and General Electric and Pratt and Whitney, both of the U.S. —concentrating on developing "families" of engines from initial basic concepts such as the RB-211, the CF6 and JT9-D series. There are some exceptions, such as the new RB 432 of about 18,000 pounds thrust from Rolls-Royce, and the CFM-56 of 24,000 pounds thrust from the Franco-American (Snecma-General Electric) company, CFM-International.

Fierce

With markets of such magnitude waiting to be won, and a limited number of contenders, the battles for business are proving fierce. For the re-equipment tide that is beginning to flow is likely to be the last for 20 years or more, before the mid to late 1990s. Whoever fails to get a share of the markets now opening will be relegated to the backwoods of the international airframe and aero-engine busines for the rest of this century. There can be no question of an airframe or engine builder waiting too long before jumping into the arena, despite the heavy investments involved.

For the re-equipment tide is likely to be short and sharp—the bulk of the orders for the next generation of airliners is likely to be placed over the next three to five years (as evidenced by some of the big orders placed by U.S. airlines last year), followed by a steady but unspectacular topping-up of the fleets through the 1980s. Some of the initial orders may appear to be small—for five to ten aircraft a time—but they are significant in that they represent a commitment by the airline concerned to that specific type of airliner. An order for five airliners now means perhaps 20 or even 30 or more in the fleet by 1990, depending upon traffic growth. Thus, the battle is not so much to capture immediately massive contracts but to secure airline commitments to specific airframes and engines that will ensure steady business for 20 years or more.

One result of this activity throughout the world's civil aircraft and engine industries is that a shortage of skilled labour is rapidly emerging. Boeing, with its 767 and 757 programmes expanding, hired 10,000 more workers last year, and will hire more in 1979, bringing its Seattle payroll to over 75,000. Aerospace companies in the U.S. have begun to look abroad for their labour, and the UK industry, as in the early 1960s, is finding itself under pressure from the U.S., where pay is higher, working conditions often more congenial, and where there is the likelihood of programmes continuing through long production runs lasting many years. Not least among the problems of the UK industry, and of the developing Airbus Industrie consortium in Europe, is to convince skilled labour that they can offer the correspondingly long-term security of employment.

Europe puts its faith in the Airbus

OUTSIDE BRITISH Aerospace itself, one of the biggest single manufacturers of civil airliners in Europe is now Airbus Industrie, the international consortium created specially to build the 250-300 seat twin-engined A-300 Airbus, and which is now also developing the smaller 200-seat A-310 version. Airbus Industrie is a "Groupement d'Interet Economique," or a pooling of common economic interests under French law. Its participants include Aérospatiale of France, Deutsche Airbus from West Germany (which in turn includes Messerschmitt-Bolkow-Blohm and VFW-Fokker), Fokker-VFW of Holland, CASA of Spain and British Aerospace of the UK, with the latter building the wings for the A-300 and also now to be responsible for the wings for the new A-310.

Airbus Industrie has experienced a remarkable success with the A-300 (which is powered by U.S. General Electric CF6-50 series engines), with total sales of 140 aircraft to 22 airlines, with options on another 53 aircraft. Of these, 59 aircraft had been delivered by end January. In addition, at that time there were also commitments, awaiting contract signature, for 60 of the new A-310s, from Lufthansa, Air France, Iberia, Swissair and Eastern Air Lines of the U.S.

Last year was particularly successful for Airbus Industrie, with new orders for 70 aircraft and 27 on option—with total business worth about £1.5bn. The organisation hopes for a similar volume of new business in the coming year.

It bases this belief on forecasts that over the next 15 years, to the early 1990s, world air passenger traffic is likely to triple in volume, with a bigger share being taken by the countries of the Third World. This in turn will generate a demand for about 4,350 short-to-medium range jet airliners, worth about £45bn, of which about 70 per cent will be needed to meet traffic growth, and the rest to replace ageing existing equipment.

Airbus Industrie further estimates that by the early 1990s demand for aircraft of the A-300 type could reach 1,200, with a similar number of 200-seaters also being needed. Of this demand, about half is likely to be generated outside North America.

Airbus Industrie's own ambition is to win at least one-third of this market, in competition with U.S. manufacturers, or between 800 and 1,000 aircraft. It believes this target to be realistic, because its existing 20 customer-airlines alone will have a total requirement for 350 A-300s by the early 1990s, and the organisation expects to be able substantially to broaden its customer base in the years immediately ahead. In addition, the five airlines which currently hold commitments on the 60 A-310s are likely between them to need at least the same number again, so that on the present customer base alone, Airbus Industrie can foresee a demand for at least 450 A-300s and A-310s through the 1980s.

Expanding

To meet rising demand, Airbus Industrie is expanding its rate of production from two aircraft a month at present to three a month by the end of 1979, and further to four a month by the end of 1980. Beyond that, depending upon demand, it could raise production further to between eight and ten aircraft a month by 1984.

Airbus Industrie sets particular emphasis on the decision by the UK Government to re-enter the consortium with a 20 per cent stake from last January 1. While Britain was originally a member of the group, formal UK Government participation was withdrawn in the late 1960s, in the belief at that time that the Airbus was not likely to be a commercial success. It was left to Hawker Siddeley Aviation (now part of British Aerospace) to stay in the A-300 programme as an "associate" on a private-venture basis, building the wings for that aircraft. But the growing success of the Airbus, coupled with the clear indications of an upsurge in world demand for new airliners, could not be ignored. After much heart-searching throughout last year, on whether or not to join Boeing in developing that company's 757 airliner, it was decided to seek readmission to Airbus Industrie, to help develop the new A-310 wings, while continuing to work on the A-300 wings. The division of participation in the consortium is now: Aérospatiale 37.9 per cent, Deutsche Airbus 37.9 per cent, British Aerospace 20 per cent, and CASA of Spain 4.2 per cent, with Fokker-VFW of Holland continuing as an associate.

So far, Airbus Industrie has spent about £500m on the development, tooling and initial production of the A-300. It estimates that the investment by the French and West German governments in that aircraft will have been reimbursed when 360 aircraft have been sold. For the A-310, the estimated development cost is about £400m, and the consortium will need to sell at least 300 of this version to recoup those costs. On present sales performance, the group is confident it can reach these figures, particularly since it believes that the biggest surge in equipment buying by the world's airlines has yet to be seen.

The basic Airbus Industrie product-line of "new-generation" airliners comprises five versions of the A-300—the B2-100 which is the basic short-haul version now in service: the B2-200 special "hot and high" airfield version, also now in service; the B4-100 which is the basic medium-haul version, also now in service: the B4-200 transcontinental model with a range of 3,100 nautical miles, which is due into service this spring; and the C4, a derivative of the B4 with an upper-deck cargo door, due into service in the spring of 1980.

In addition, the new A-310 is being offered in two versions—the Series 100, which it is claimed will be the lowest-cost wide-bodied jet airliner for short-haul operations, and the Series 200, which is the medium-range version, both intended to enter service in the spring of 1983.

Beyond these, Airbus Industrie has plans for other new types of aircraft, including the B-11 which would be a four-engined, long-range aircraft, and the Joint European Transport (JET) programme for an airliner seating variously between 130 and 160 seats. So far, no decisions on either of these programmes have been taken. Airbus Industrie is still studying trends in the world market, and it not yet convinced that it is time to spend valuable resources on aircraft for which the potential is still unclear. But it believes that by the end of this year, the trends will have clarified, and only then will it take decisions to launch one or another of these programmes, or perhaps even both.

This does not imply that Airbus Industrie is not continuing design work on either of these possible ventures. Indeed, the JET programme is already one of the most extensively researched ventures in the world. But it is one thing to conduct studies and another to commit the several hundred millions of pounds that would be needed to launch the JET venture into production. Many people throughout the world's aerospace and airline industries, including some in Airbus Industrie, are convinced that a market will emerge for new aircraft seating less than 160 seats, perhaps split into two types of aircraft, one seating between 100 and 130 seats and the other between 130 and 160. Boeing, for example, is so convinced that, even while concentrating on its new 757 and 767 airliners, it has set up a study group to look at the possible future developments of its existing short-to-medium haul narrow-bodied best-sellers, the 737 and 727, so as not to miss the market tide when it begins to flow. Airbus Industrie, through its work on the JET to date, can argue that it is not ignoring the possibilities, even though it is not yet ready to commit funds to a specific design.

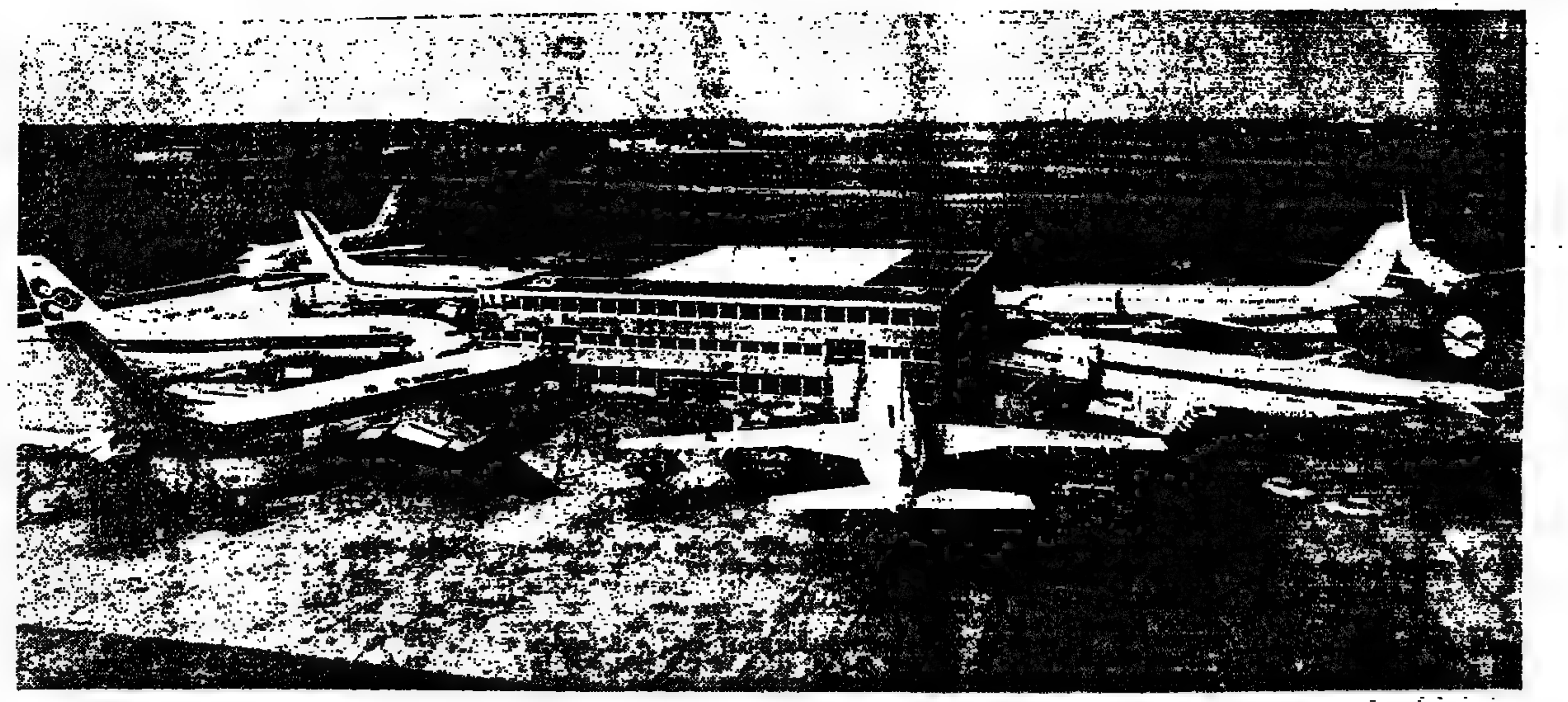
But it is clear that, if any JET venture becomes desirable, it is within the scope of Airbus Industrie to do it. It now seems certain that this organisation will become increasingly the "chosen instrument" of the British, French and West German Governments for the development of any major new civil airliners for the rest of this century, other than perhaps any second-generation supersonic airliner and ventures in the smaller category, such as 100-seaters and below. Airbus Industrie has now become one of the world's major manufacturers in its own right and its stature is growing at such a pace that it must now be regarded as the focus of European "big airliner" development.

Fokker of Holland, however, does not share Airbus Industrie's current reluctance to develop a new airliner in the smaller category, and it is now well advanced with its plans for what it calls its Super F-28, a 115-130 seater which is destined to become the successor for the current successful F-28 Fellowship twin-jet airliner. It is intended to be on the market by 1985. The Super F-28 has reached the stage where Fokker, over the next few months, will be conducting market research, with visits to some 20 airlines throughout the world, including a number of existing F-28 operators, while it will also be seeking risk-sharing partners on the programme. Depending on the results of these activities, Fokker hopes to be able to reach final programme definition phase by the third quarter of this year, with a go-ahead before the end of the year.

The Super F-28 is designed for high-frequency short-to-medium hauls, and for operations from airports with stringent noise regulations, short or semi-prepared runways, and from airports with minimal ground facilities. The new airliner will be powered by two "new generation" engines—with the Rolls-Royce RB-432 under consideration.

It is clear that the Super F-28, with its ability to carry up to 130 passengers over distances of up to 1,500 nautical miles, will provide severe competition for any Joint European Transport (JET) programme emerging from Airbus Industrie in this category. The Super F-28 is also likely to meet competition from Boeing, with the improved 737 short-haul twin-jet, and also from the British Aerospace BAe 146 four-engined feeder-liner, now under development.

Fokker also intends to continue production into the 1980s of its existing smaller 44-56 passenger twin-turbo-propeller airliner, the F-27 Friendship, of which it has now built more than 670 over the past 20 years, making it one of the most successful airliners of all time. The market for airliners of less than 100 seats in all is a large one, world-wide, and in recent months there have been signs of renewed interest in these smaller types of transport, especially for twin-turbo-props for regional and "commuter" type operations. Fokker is still building the Friendship at a rate of two a month, which could be increased if demand justified.



A-300 Airbuses in the final fitting out area (called the "Abreuvoir," or cattle trough) at Airbus Industrie's Toulouse, France, factory, where Airbuses are assembled from parts shipped from all over Western Europe and the U.S.

Soviet strength still a mystery

THE SOVIET UNION has always been self-sufficient in civil airliner design, development and production. Since the end of the Second World War, while there have been various attempts to sell the Soviet Union Western-built airliners, these have not been successful. The same applies to engines. While the Soviet Union itself not so long ago began to show considerable interest in the latest generation of "big thrust" jet engines, such as the Rolls-Royce RB-211 and U.S.-built powerplants, at about the time that Soviet interest in big, wide-bodied airliners also began to grow, no sales have been achieved, probably as much for political as for technical reasons.

But that the Soviet Union has a big civil airliner manufacturing capability is self-evident. Aeroflot, the State-owned airline, last year is estimated to have carried well over 100m passengers throughout the Soviet Union and internationally, and in the past 30 years or so the big "design bureaux" with famous names such as Antonov, Ilyushin, Tupolev and Yakovlev have maintained a steady stream of transports, some of them clearly with military as well as civil tasks in mind, but some of them also clearly resulting in long "production runs," such as the Tupolev TU-134 short to medium-range transport, the TU-154 medium-to-long range trijet, and the four-engined Ilyushin IL-62 long-range jet.

The Soviet Union has also moved into supersonic civil aviation, with the four-engined TU-144 airliner, nicknamed "Concordski" by some for its broad similarities with the Concorde design.

Precise statistics of Soviet civil airliner production are not published in the West. But on the basis of the sheer size of Aeroflot itself, it seems likely that total output over the past 20 years or so of jet airliners alone runs to many hundreds of aircraft, and that production plans for the 1980s must be geared to maintaining, and even increasing, this to meet the expanding requirements of Soviet internal air transport.

The TU-144 supersonic airliner appears to have suffered what appear to be considerable technical problems, although the crash of one of the prototype aircraft at the Paris Air Show in 1973 was due more to an attempt to make the aircraft do what it was not designed to do than to any failure of basic engineering or design. But it is a fact that although regular scheduled passenger services were begun in late 1977 between Moscow and Alma-Ata (earlier flights had been with freight and mail), these were halted in mid-1978, and do not appear to have been restarted. There have been almost no reliable reports in recent months as to when the airliner will come back into regular passenger service. The TU-144 is thus now well behind the Concorde, which began its own regularly scheduled services in January, 1976 and which has maintained and expanded its operations steadily since then.

Quality

But although the TU-144 itself may have run into technical problems, there can now be no doubt whatsoever about the overall high quality of Soviet aerospace engineering. Any industry that can produce military aircraft such as the MiG-25 Foxbat, orbit manned space-capsule around the earth and conduct successful unmanned long-distance interplanetary probes, as well as produce airliners in quantity such as Tu-134s and Tu-154s must be of just as formidable capability as that of the U.S.

There is no doubt, from a close study of civil aircraft sent to the Paris International Air Shows at Le Bourget over the past decade or more (one of the major methods available to the West of assessing just what progress is being made in the Soviet aerospace industry) that engineering and design techniques have improved considerably, as well as the quality of the basic manufacturing. The Soviet Union is also not afraid of innovative design techniques, as evidenced by some of its giant helicopters seen in recent years, such as the Mil Mi-10 Flying Crane demonstrated as far back as the 1961 Soviet Aviation Day display at Tushino, Moscow, and the more recent giant V-12 transport helicopter.

The most significant new civil transport aircraft for the 1980s now under development in the Soviet Union is the four-engined Ilyushin IL-86 wide-bodied, short-to-medium range airbus, which, when it enters service later this year, is expected to be able to carry up to 350 passengers over distances of about 2,500 nautical miles. This makes it broadly equivalent to the basic versions of the McDonnell-Douglas DC-10 and Lockheed TriStar, although it is larger than the European A-300 Airbus.

The IL-86 has been under development since the early 1970s, and reports from the Soviet Union suggest that it is intended to enter service with Aeroflot some time later this year, and certainly in time to carry visitors to and from the Soviet Union for the 1980 Olympic Games in Moscow.

There are three prototypes, of which the first, CCCP-86000, made its maiden flight in late 1976. The aim since then has been to complete at least 1,200 hours of flight testing before deliveries for airlines service are begun. The first production IL-86, CCCP-86002, which is also reported to be the third prototype, flew in October, 1977. The prototype aircraft was first shown to the West at the Paris Air Show of 1977, when it was seen to be of broadly conventional design, with the four Kuznetsov NK-86 jet engines (each of about 28,660 lbs thrust) slung on pylons under the wings, like the Boeing 707 and 747. This represented a change from the original preliminary design of the aircraft, which when shown in model form in Moscow in 1972 had its engines mounted at the rear of the fuselage, like the earlier IL-62 four-engined jet.

Reports have suggested that one of the new ideas in the IL-86 is that the passengers should be able to carry at least light baggage aboard for stowage in the lower fuselage deck, before climbing up to the main passenger deck.

No indications have been given of the total volume of production of the IL-86, but it seems likely that not less than 100 will be required by an airline as large as Aeroflot, and maybe eventually many more will be built. The IL-86 is clearly intended to become the work-horse of the Aeroflot trunk routes, and its range appears to be adequate to cover a substantial part of Aeroflot's network non-stop. It has been suggested that the IL-86 may also be used by the Soviet Air Force as a troop transport.

So far, no export sales efforts appear to have been made outside the Soviet bloc for the aircraft, but it seems likely that once the IL-86 has entered service with Aeroflot, and has met that airline's immediate needs, efforts will be made to sell it to the airlines of the Soviet satellite countries. So

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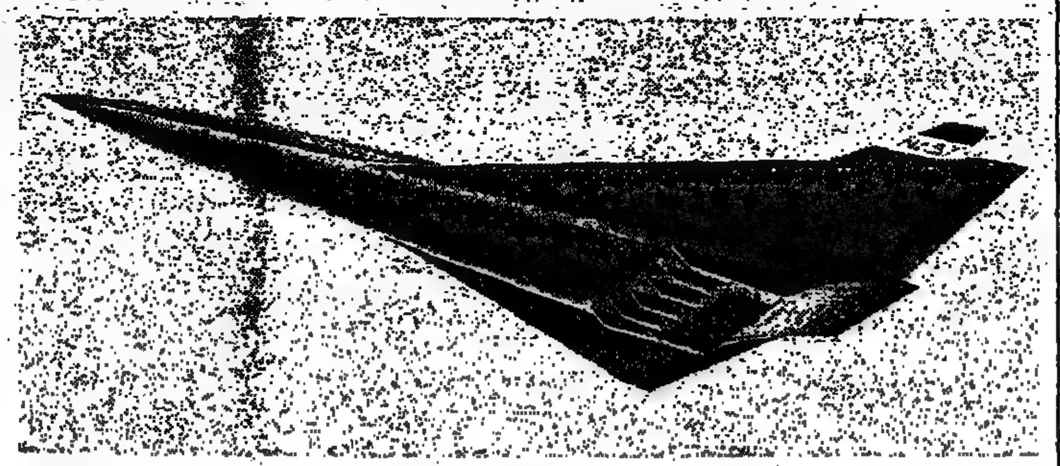
Ambitious U.S. programmes

THE UNDOUBTED pacemaker in the development of the new generation of jet airliners is Boeing of the U.S. Already the biggest single manufacturer of jets in the world, Boeing during 1978 won firm orders for no less than 479 aircraft making that year the best yet for the company. All the signs are that the coming year will be just as good, with a continued heavy inflow of orders for its existing range of 747 Jumbo jets, 727 three-engined medium-range jets and 737 twin-engined short-haul airliners, and hopefully also a substantial build-up of customers for the two new airliners on offer, the 757 narrow-body twin-engined airliner, intended to carry up to about 200 passengers over distances of 2,300 miles, and the bigger "semi-wide-body" twin-engined 767, also designed for payloads of between 200 and 252 pasengers over distances of 2,500-3,000 miles.



The shape of the future? Early design work for an airliner burning liquid hydrogen fuel instead of kerosene obtained from oil, is being done by Lockheed of the U.S. The aircraft, of which an artist's impression is shown here, would be able to carry 200 passengers from London to New York in under two hours with a cruising speed of 4,000 mph. Construction, however, is not yet proposed.

Although both these new airliners were announced only last year, Boeing has won orders for 84 of the 767s (United 30, American 30, Delta 20, and Pacific Western 4) with options on another 81 aircraft from those four airlines and another customer, Interlease. Boeing has also won orders for 40 757s, including 19 from British Airways and 21 from Eastern of the U.S.

Customer

Features of both the new airliners are their international contents. Boeing is offering the 767 with a choice of engines from all three major engine-builders, Rolls-Royce, Pratt and Whitney and General Electric. So far, both Pratt and Whitney and GE have won orders from 767 customers, but Rolls-Royce is still fighting hard.

Among new customers thought likely to buy the 767 are Air Canada, KLM of Holland and Northwest Airlines of the U.S. Air Canada, already a major user of Rolls-Royce RB-211 engines in its fleet of Lockheed TriStars, can be considered a likely customer for the same engine in any 767s it may buy.

For the 757, however, Rolls-Royce appears to be in a much stronger position, for another version of its RB-211 engine, the Dash 535, has been selected as the "lead engine" for the aircraft for both British Airways and Eastern Air Lines. Further contracts for the 757 with the Dash 535 are in negotiation.

Boeing has also signed agreements with two foreign companies to help develop the 767—with the Civil Transport Development Corporation of Japan (a consortium of Japanese aircraft manufacturers and component suppliers) and Aeritalia of Italy. The CTDC will build body panels and doors, wing-to-body fairing assemblies and main landing-gear doors for the 767, with Mitsubishi Heavy Industries, Kawasaki Heavy Industries and Fuji Heavy Industries all involved under sub-contracts from the CTDC. These three companies already produce parts for other Boeing airliners. Aeritalia will build portions of the 767 wing and tail. Many U.S. companies will build other parts of the new airliner.

Boeing's ambition is to win orders for more than 1,000 aircraft of each type, securing production through into the early 1990s. First flight of the 767 is planned for the summer of 1981, with deliveries in mid-1982. The 757 flies late in 1981, or early 1982, with deliveries in early 1983. Boeing's investment on the 767 is estimated to amount to about £750m, and that on the 757 to about £500m largely because some parts of the 757, including parts of the fuselage, will be derived from the existing 727, while the 767 will be all new.

As with all Boeing aircraft, the eventual aim is to produce a "family" of jets. Potential future models include a three-engined aircraft, called the 777, which would have both medium-range and eventually long-range, while another variant could be a smaller, twin-engined model for very short-ranges. In both instances, Boeing recognises that it could be straying into the existing Lockheed and McDonnell Douglas triject markets and perhaps also biting into its own future markets for 737 short-range jets. But the fact that it is studying all the available options indicates that it does not intend to allow itself to be caught napping by the opposition through the 1980s.

Improvements

This is also evidenced by the fact that, while it is concentrating on its two new-generation jets, Boeing is also planning improvements in its existing product range. With 445 Jumbo jets already sold, of which 352 have been delivered, the company is actively seeking new orders, and is also planning new versions of the aircraft that through the 1980s could improve its range and payload performance, perhaps eventually taking it up to 750 or even 1,000 seats. Similarly, with 1,645 727s and 688 737s sold to date Boeing has set up what it calls a "product development group" to study potential major improvements to both aircraft, as well as possible special versions of them. The aim is to ensure that both the 727 and 737 remain fully competitive throughout the 1980s with whatever new aircraft emerge from competitors—such as the projected 115/130-seater Fokker Super F-28, which would be competitive with the 737, and any Joint European Transport (JET) programme for a 130/160-seater airliner which would be competitive with the 727. Headed by Mark Gregoire, formerly head of 727 marketing management, the new group will concentrate on ensuring that the 727 and 737 keep pace with developments elsewhere in the 100/150-seater class of aeroplanes, and at the same time try to put the 727 and 737 ahead if possible. Mr. Gregoire says his group will look at possible engine changes, major wing changes, body stretches and the advanced aerodynamics and structures going into the 757 and 767 ventures "to see if their use on current products could be cost-effective." Boeing is also studying the possibility of re-engining the 707 (940 sold) with the Franco-American CFM-56, and will test-fly the engine this year.

McDonnell Douglas, according to president and chief executive officer Sanford N. McDonnell, is anticipating that over the next 10 years, between $8bn and $10bn-worth of airliner orders will be booked annually by the U.S. aerospace industry, a total of close to $100bn for the decade as a whole.

The company is basing its long-term plans on two major models—the existing DC-10 tri-jet medium-to-long-range aircraft, and the DC-9 twin-engined short-to-medium range airliner, with derivatives of both to expand the family of jets on offer, while it is also still considering the possibility of a new airliner, the Advanced Technology Medium-Range transport, the ATMR, to fill the gap in the broad 140-180 seat range.

The emphasis, however, on the DC-9 and DC-10 families stems from the company's already exceptional success with these aircraft. Throughout 1978, the inflow of orders was such that production of both DC-9s and DC-10s is now sold out through to mid-1981, with orders still flowing in. During 1978, the company received orders for 43 wide-bodied DC-10s, compared with 29 in 1977, and at the end of the year, the company had firm orders for 318 DC-10s, and conditional orders and options for 47 more, bringing the overall total to 365 aircraft, of which 263 had been delivered. Firm orders for 66 DC-9s were received last year, bringing total orders by end-1978 to 992, which with conditional orders and options for 33 others raised total orders to 1,025 aircraft, of which 893 had been delivered.

The current emphasis in the company is to extend the DC-10 family of airliners, by "stretching" the fuselage to enable more passengers to be carried. Two such stretches are envisaged, one of 26.7 feet, which would raise the payload from the present 275 to 353 passengers, and the other of 40 feet, which would raise the payload to 393 passengers. The company has been discussing these plans with airlines for some months, and responses have been good. But the company has been holding off, to make sure it has a sufficient number of airlines for a go-ahead. It hopes to make up its mind by the spring.

The other major area of interest for McDonnell Douglas at this time is in the DC-9 twin-engined airliner, where for some months it has been offering the stretched "Super 80," now under development. By the end of 1978, nine airline customers had placed orders for 50 Super 80s.

Competitive

Beyond these two aircraft families, there is the possibility of developing the ATMR 140-160 seat aircraft, perhaps in collaboration with the European Airbus Industrie consortium, or with British Aerospace independently.

The point here is that, having abandoned its DC-X-200 and dropped out of the battle for the 200-seater market, which it believes to be too competitive with such aircraft as the Boeing 767 and Airbus Industrie A-310 already deeply committed, McDonnell Douglas sees a big market emerging in the 140-160 seater area, for an airliner with improved technology in both airframes and power-plants. While little has been heard of the ATMR in recent months, it would be wrong to assume that it is dead, and much more may be heard of it during the remainder of 1979.

What does seem clear at this stage is that, with heavy financial commitments on the stretched DC-10 and on the Super 80 DC-9, McDonnell Douglas is not likely to commit itself to developing any ATMR-type aircraft on its own. It would prefer to collaborate with a foreign manufacturer, and its preference is for Europe, although Japan is not ruled out.

The third of the big U.S. jet airliner builders, Lockheed, is concentrating on its TriStar three-engined aircraft, using Rolls-Royce RB-211 engines, with total sales of 264 (196 firm orders and 71 options). Its philosophy is that, instead of devising new and expensive models, a substantial market can be won by continually incorporating improvements in technology. The TriStar is available in a number of variants of which perhaps one of the most significant is the Dash 500 extended-range version, capable of carrying between 246 and 300 passengers over distances of more than 6,000 miles non-stop, using the most powerful version of the RB-211 engine, the Dash 524. One of the "advanced technology" developments that is being incorporated on the Dash 500 TriStar is the flight-management system that will so help to programme flights that the airlines using the Dash 500 (including British Airways) will save a lot of money. This system, which uses an on-board computer to control every detail of a flight from take-off to touch-down, including performing the navigational tasks, will save as much as 3 per cent on fuel on a typical London-Bahrain flight, or some 680 gallons or over £200. Thus, over a year's flying, it could save an airline millions of pounds in a fleet of Dash 500s.

Soviet mystery

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far as Western countries are concerned, the competition from the existing major manufacturers, Airbus Industrie, Boeing, Lockheed and McDonnell Douglas, must be regarded as such that the Soviet Union will have an almost impossible task in trying to win orders for the IL-86.

The other new transport aircraft of which much more is likely to be heard during the 1980s is the Yakovlev Yak-42, a three-engined aircraft (Lotarev D-36s, each of 14,200 lbs. thrust), mounted at the rear of the fuselage. The aircraft is intended to carry between 100 and 120 passengers over distances of up to 1,000 nautical miles, which makes it essentially a short-range aircraft. But a feature of the design, is its ability, with short take-off and landing, to use rugged and unprepared airfields and grass airstrips, serving remote communities throughout the Eastern and Northern areas of the Soviet Union, so that it is essentially a "feeder-liner" as well as a local-service "community-linker" in its own right.

It is reported that at least three versions of the aircraft are planned — a 100-seater with carry-on luggage facilities for local-service routes, a 120-seater with baggage holds for minor trunk lines, and a convertible version that can be used as a freighter as well as passenger aircraft. The in-service date is said to be 1979.

The Yak-42 will probably become one of the most widely used airlines in the Aeroflot fleet. Up to 2,000 aircraft of this type are needed throughout the Soviet Union, to replace ageing piston-engined and turbo-propeller equipment which has been the mainstay of the feeder-liner and local-service routes for many years. The basic design objectives of the Yak-42 have been simple construction, reliability and economy in operation, and ruggedness for operations in a wide variety of physical and climatic conditions.

If offered for sale to the West at a reasonable price, and with an adequate guarantee of spare provisioning and long-term maintenance, it could become a competitor to feeders-liners currently under development, such as the British Aerospace BAe 146 or the Fokker Super F-28.

Efforts

But the Soviet efforts to sell airliners to the West in the past have never been very successful despite the fact that the Soviet Union has taken a number of its latest civil aircraft to every Paris Air Show for years. The reason seems to be that the will for salesmanship is lacking. Aircraft on display at Show after Show have been firmly fenced off and locked against prying Western eyes and there has been a marked lack of willingness on the part of Soviet aerospace officials to give away information about their airliners. This has resulted not only in Western observers being unable to get all the details they need, but also a lack of interest on the part of airlines who can get more than enough information on rival Western products with no problems whatsoever.

It remains to be seen what the Soviet Union will bring to this year's Paris Air Show at Le Bourget in June. But if there is any serious intention on the part of the Soviet Union to sell its new airliners to the West through the 1980s, it will have to make major efforts soon, for the competition is formidable, and growing.

In the meantime, the Soviet Union's long-distance airliner operations are being conducted by the Ilyushin IL-62 four-engined airliner, of which various versions have been introduced since the aircraft first entered service with Aeroflot in 1967. Like Britain's VC-10 airliner, the IL-62 has its four engines mounted in pairs on either side of the rear fuselage. A developed version of the airliner, the Model M, with higher-thrust engines and a long-range fuel tank in the tail-fin, appeared at the Paris Air Show in 1971, and last year another variant was announced, the Model MK. This, although dimensionally unchanged, has a greater maximum weight, to enable up to 195 passengers to be carried over long distances. Well over 125 IL-62s of various versions are reported to have been built, and the aircraft is in service not only with Aeroflot, but also the airlines of Czechoslovakia, Poland, East Germany, Communist China, Romania and Cuba.

UK faces a testing year

THE COMING year will be vital for the civil aircraft side of British Aerospace (BAe), the nationalised UK aircraft manufacturer. During it the corporation will be getting under way on several new ventures, designed to fill the gaps created by the rundown and completion of earlier programmes (such as Tridents and Concordes), and to secure its future in the expanding world markets of the 1980s.

These ventures cover a wide sector of the range-payload spectrum. They include not only the wings for the wide-bodied A-300 Airbus and now also its smaller 200-seat partner, the A-310, but also work on the new BAe 146 four-engined feeder-liner; possibly a new version of the One-Eleven twin-engined airliner, in a bid to keep this aircraft in production through the 1980s against intensifying competition from other short-haul twin-engined airliners; a new version of the smaller twin-turbo-prop Jetstream light transport; and continued evolution of the 748 twin-turbo-prop feeder-liner.

So far as the A-300 and A-310 are concerned, UK participation on wing design, development and production is expected to involve at least £250m through the 1980s, with an initial payment of £50m. The formal UK Government re-entry from January 1 into the European Airbus Industrie consortium also opens the way for participation in other new developments, such as the so-called Joint European Transport (JET) programme for airliners of below 160 seats. So far, no precise ventures in this latter broad area have been defined, but studies have been and are still being undertaken.

It is hoped that before the end of 1979 market requirements will have clarified, and a European programme will begin to emerge. An integral part of these studies is into the availability of engines. The possibilities include the proposed Rolls-Royce RB-432 and the Franco-U.S. Snecma-General Electric CFM-56.

Critical

The coming months will be particularly critical for the BAe 146, a programme originally begun in 1974 but halted because of deteriorating world economic conditions, and only revived last year. While considerable interest has been shown, British Aerospace will need firm evidence that it is likely to sell, so as to justify the long-term investment in the venture of as much as £250m. No orders have emerged so far.

The aircraft is aimed, however, at a market that BAe believes will yield sales by 1990 of up to 250 aircraft, plus another 100 in a military version. The aircraft is being built initially in two versions, the 146-100 seating 70-90 passengers, and the larger 146-200, seating 83-109 passengers. First flight is planned for late 1980, with first deliveries in 1982. The jet engines will be supplied by Avco group of the U.S., which is also building wings, while Saab of Sweden, is also involved building the rear fuselage.

The new Jetstream 31 light transport was launched late last year. Already U.S. operators are showing interest in this twin turbo-prop aircraft as a potential "commuter-liner," and it is understood that several options have been taken out by three operators. The first prototype is due to fly late this year, with first deliveries in 1981. The aircraft is being launched at a time when commuter airliner business in the U.S. is booming with scheduled traffic in this field up 17.4 per cent last year."

The twin turbo-prop Type 748 airliner is also benefiting from this reviving interest in smaller, quieter, fuel-efficient airliners. During 1978 British Aerospace won new orders for 16 of these aircraft, bringing total sales to 339—of which 85 per cent have been for export—and production is scheduled to continue at a steady rate into the 1980s. It is possible that the French Navy may buy up to 12 aircraft for navigation training, paratroop dropping and martime reconnaissance tasks.

Agreements

One of the biggest programmes at British Aerospace has been the One-Eleven twin-engined jet airliner, of which to date 227 have been sold, worth about £390m. The corporation is now closely studying plans for continued development into the 1980s.

British Aerospace teams have been in Romania recently to settle details of the licence manufacturing agreements signed in principle last summer. These envisage a phased programme of manufacture and assembly in Romania of complete One-Eleven aircraft (both in the Series 500 seating up to 119, and the Series 475 seating up to 89), covering about 80 aircraft. The first three aircraft will be assembled at the Hurn factory of BAe, and the UK will then supply to Romania kits of parts for the next 22 aircraft. Meanwhile, authorisation has been given by BAe in the UK for the manufacture of another eight aircraft, to bring total production to 235, with material being ordered for further aircraft beyond that.

Sales efforts are continuing world-wide, and further developments of the aircraft may emerge in the near future.

This is essential if the One-Eleven is to continue to compete not only with existing twin-engined types such as the Boeing 737, the McDonnell Douglas DC-9 and the Fokker F-28, but also derivatives of those aircraft now either in development or production, or envisaged for the future.

Business and executive jet aircraft are outside the main scope of this survey, but British Aerospace is putting considerable emphasis on continued success with its Type 125 executive aircraft, of which 425 have been sold to 29 countries, including 244 in North America. A new version, the Series 800, is being studied, perhaps with the new Rolls-Royce RB-401 engine, designed specifically for a new generation of business jets.

Contribution

The Series 800 would have a new "advanced-technology" wing, and probably also a re-designed fuselage, to seat up to 10 passengers in an executive model and up to 19 in a high-density version. It would have a greater range, over 3,000 nautical miles.

Collectively, all these ventures represent British Aerospace's contribution to the world's civil markets for the immediate future. Other new ventures may emerge, such as the JET, but if all the activities currently envisaged prove successful, British Aerospace will have a substantial workload throughout the 1980s. It is already seeking more skilled labour to meet what it foresees as a major expansion in its civil production capacity.

There remains the question of supersonic airliners. All 16 production Concordes originally authorised will have been built by the end of this year, and the programme has been run down so far that it is unlikely that there will be any more of this generation of aircraft, even if new orders were to emerge for Concordes beyond the five still awaiting sale.

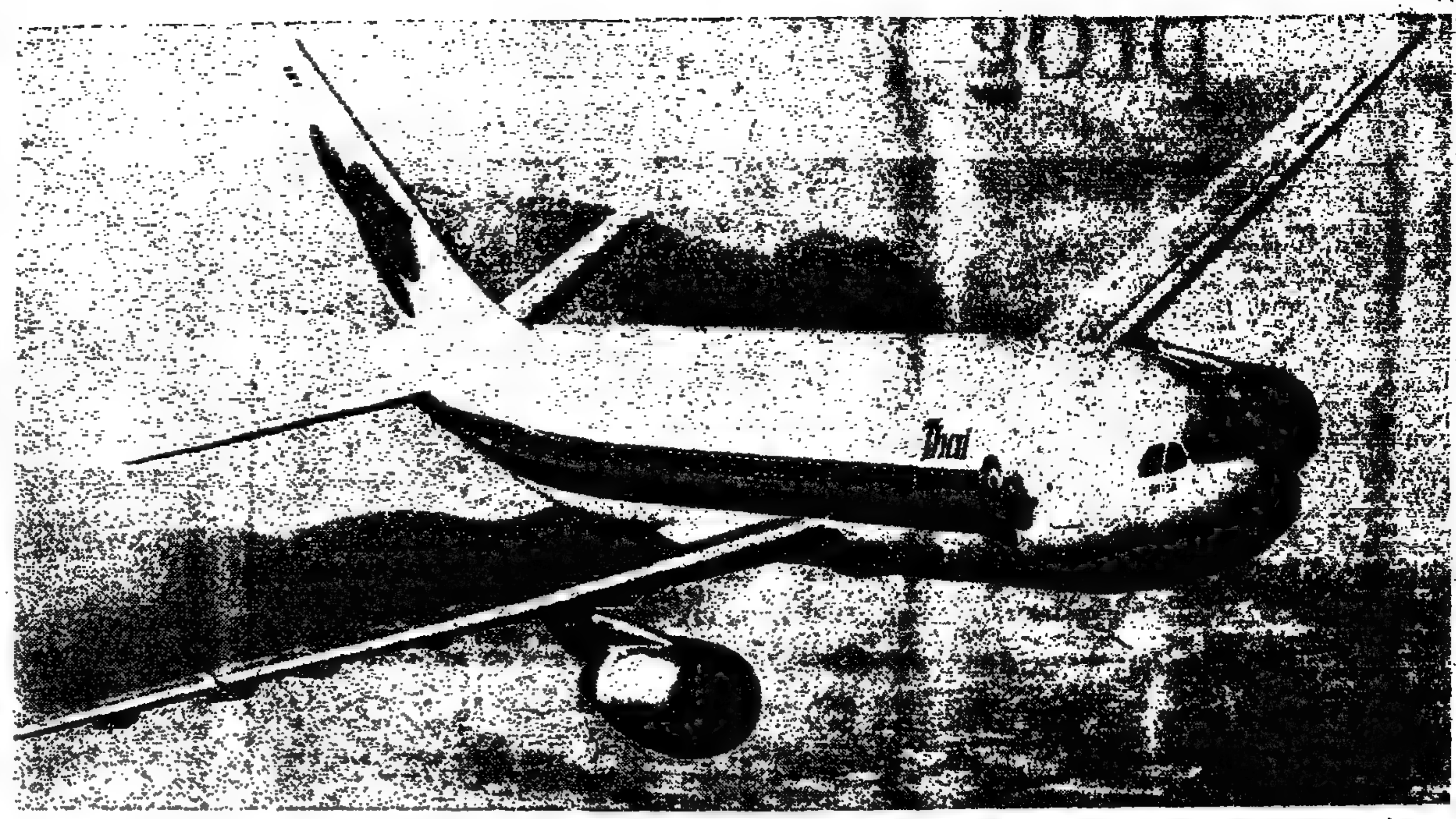
So far there has been no enthusiasm outside the aerospace industries of Britain, France and the U.S. for any second-generation supersonic airliner, and even inside those industries it is recognised that any such development, to have any chance of success, would have to be a tripartite venture, with the full financial support of governments. It is also recognised that any such development would be unlikely to enter service much before the mid to late 1990s, and even that would require a start around the mid-1980s.

Research studies have been under way on a low-key basis inside British Aerospace and McDonnell Douglas of the U.S. for some time, with both Boeing and Lockheed also maintaining an interest, but no-one believes that any significant development is likely to emerge in the near future, if only because all the manufacturers will be too preoccupied financially and technically with meeting the requirements of the new subsonic era now beginning.

One of the most promising of the new UK generation of airliners is a small 30-seat "commuter" aircraft, from State-owned Short Brothers and Harland of Belfast. Officially designated the 330, this is a twin turbo-prop aircraft, with a wide-bodied fuselage, designed especially to link the large or medium-sized airports with the smaller, suburban regional airports. During 1978, 22 were sold to seven airlines, bringing total sales to 34, with two more aircraft on option. The 330 is already in service with airlines in the U.S., Canada, Europe, the Caribbean and Hawaii.

This is a promising result from a small company with limited resources, and Shorts has high hopes of continuing production of the 330 through the 1980s and beyond. Exploiting the potential of the 330 is one of the major objectives of the company's five-year plan recently approved by the UK Government, resulting in a new State investment of £60m in the company up to 1982.

Shorts will also have a significant role in the manufacture of new generation jets for other companies. It is already a major sub-contractor, for example, to Lockheed on the TriStar programme and to Boeing on the 747, while it also "pods" the Rolls-Royce RB-211 engines for both those aircraft, and has won the contract to pod the new RB-211 Dash 535 engines for the Boeing 757s ordered by British Airways and Eastern Air Lines.



An A-300 Airbus in the colours of Thai Airways International of Thailand

Equipment manufacturers race against time

IT IS estimated that of the total outlay of between £40bn and £60bn throughout the coming decade on new generation airliners of all kinds, about one-third, or between £15bn and £20bn, is likely to be spent directly on equipment, components and systems. These include such items as tyres, wheels, brakes, hydraulic and electrical systems, galleys, furnishings, and all the specialist "avionics"—airborne electronics—without which the modern airliner cannot fly. The latter category alone has assumed increasing importance in recent years, as the constant search for greater flight efficiency as costs have risen, and for ever greater safety in all weathers under all climatic conditions, has resulted in substantially more complex navigation control systems and landing aids, frequently involving on-board computers.

In addition to this direct share of the outlays taken by the equipment and component manufacturers, the shares of the airframe and engine manufacturers (roughly about one-third each) of the total cost of any airliner is again sub-contracted out to specialist manufacturers in other industries—such as metals, ceramics, glass, textiles, paints and so on—so that eventually, probably as much as three-quarters of the cash that an airline spends on a new fleet of airliners eventually finds its way throughout a wide spectrum of modern industry, often to companies far removed from aerospace manufacturing.

Orders

It is impossible to assess the precise extent to which direct airliner orders thus contribute to the overall levels of any country's employment and economic activity, for the number of companies involved eventually runs into several thousands contributing to just one new type of airliner or engine alone. But this fact alone should be sufficient to convince the sceptics that money spent on aviation is not just confined to a narrow sector of the economy, but benefits virtually all of it, sooner or later, in one form or another.

The business of supplying equipment and components to the "principals"—the airframe and engine manufacturers—has undergone some substantial changes in recent years, and these continue. One change is that the business has become increasingly international. The number of new types of engine and airframe decreases with each new generation, as a result of rising costs and increasing size, but the potential production runs of any given type of successful airframe or engine are frequently longer than at any time in the past. This means that while competition has become fiercer, the rewards for success have become significantly greater.

But, at the same time, the specifications have become much more demanding, and the risk investment involved much greater. The result has been that equipment and component manufacturers have either had to become much more internationally minded to be able to bid for business several thousands of miles away, or prepared to spend substantial sums in developing products in advance of any guarantees of orders, or both.

Cheaper

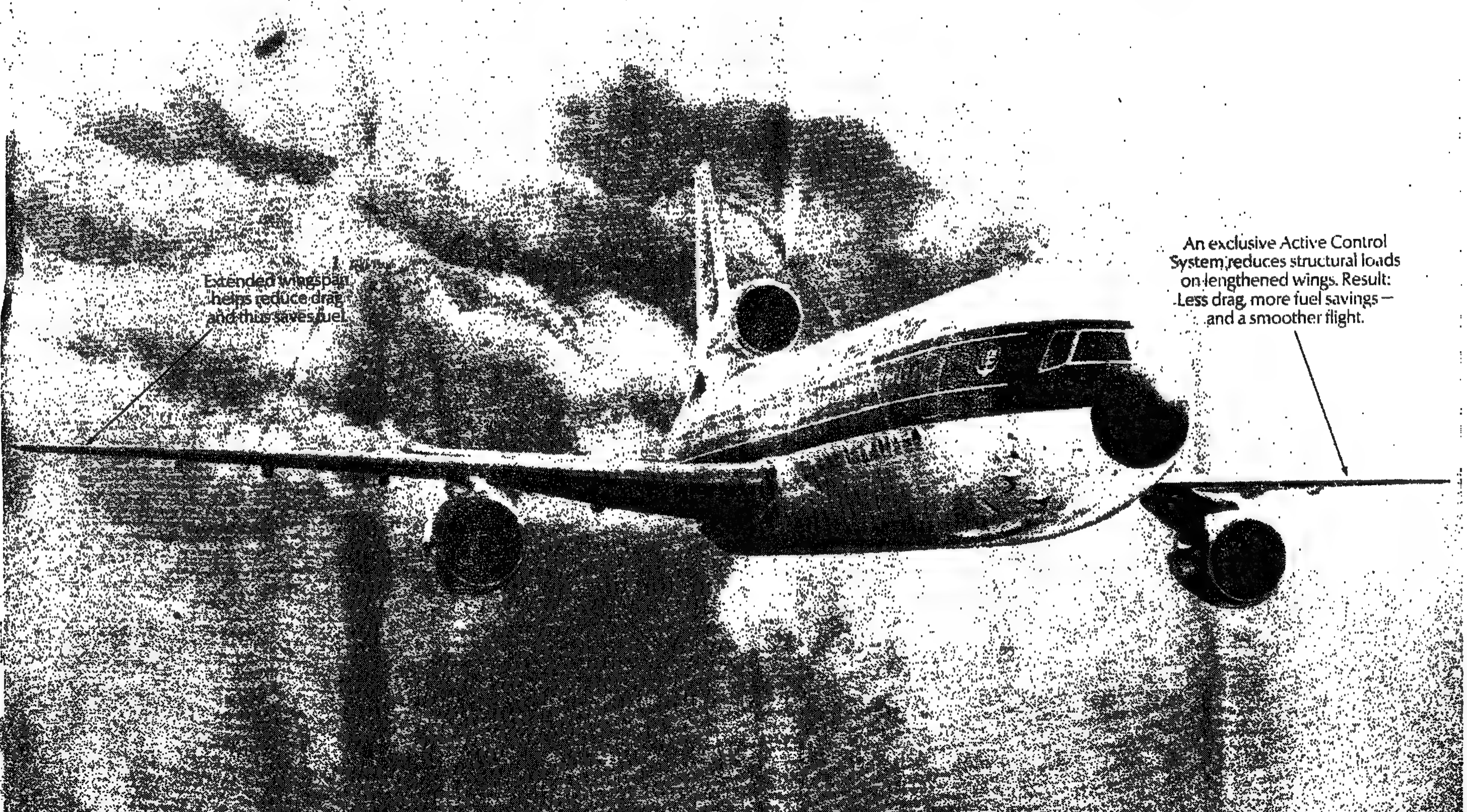
Another significant trend is that the preliminary aircraft designer no longer settles his specification, chooses an engine and systems, and offers the lot to the airlines as a package on a fly-away take-it-or-leave it basis. That may still be the case with some of the smaller and cheaper new ventures. But for the modern, wide-bodied jets, costing upwards of $30m apiece, the tendency is increasingly to allow the airline customer his own choice of what goes into the airframe he is buying. Thus, while a new air frame may have some basic systems common to every model, such as hy[illegible] controls, undercarriages, hydraulics and so on, many of the specialist items, from the engines through to the navigational systems, are left to the csutomer's choice, especially if the airline concerned is making a major purchase for many years to come. The extent to which this is done depends to a large extent upon how much the customer-airline is prepared to pay for departing from the basic design specification—and it can prove expensive indeed. But it is increasingly being done, which is why most manufacturers nowadays, are offering the airlines a choice of up to three engines on the new wide-bodies, with virtual freedom to choose any specialist systems they like. Thus, the making of a modern airliner is no longer a comparatively simple two-way exchange between the airframe and engine makers and the airline, but frequently involves as many as half a dozen major international companies, providing airframes, engines, electronics and other items, with a host of other smaller companies also eventually involved.

The inevitable corollary is that the whole business of airliner building and selling has become much more competitive, with some bitter struggles taking place not only at the peak of the pyramid to get the basic aircraft type selected by a specific airline, but all the way down as companies strive to win contracts for their equipment.

The size of some of these contracts can be seen by some of the basic systems that Boeing has been selecting for its new 767 and 757 airliners. Most of these contracts have been awarded inside the U.S., but Boeing has made it clear that other companies world-wide are free to bid, and many UK companies are in the running. So far, among the major contracts awarded have been those to Cleveland Pneumatic Company for the main 767 landing gear, to Menasco for the nose landing gear assemblies, to Honeywell's Avionics Division for the inertial reference navigation system for both the 767 and 757, and to Sperry Flight Systems for flight management systems, and Parker Hannifin/Bertea for flight control actuators. The engine-thrust management system for both the 767 and 757 is going to General Electric's Aircraft Equipment Division, even though there will be different engines on the two aircraft. Sundstrand Aviation Electric Power will supply the electric power generation systems for both the 767 and 757. All these contracts cover up to 800 "shipsets" of the systems concerned, indicating that Boeing is itself confident of winning substantial orders for its new airliners in the years ahead.

But more significantly, these deals also indicate just how vitally important it is for any equipment, component or systems manufacturer to break into the field now, in 1979, while the contracts are on offer. As with the engine manufacturers, time is not necessarily on their side, and once the major requirements have been filled, they are likely to remain closed for a very long time to come.

The world's most advanced jetliner spreads its wings to cut fuel costs.



Soaring fuel costs are spurring builders of big jetliners to find new ways of reducing fuel consumption.

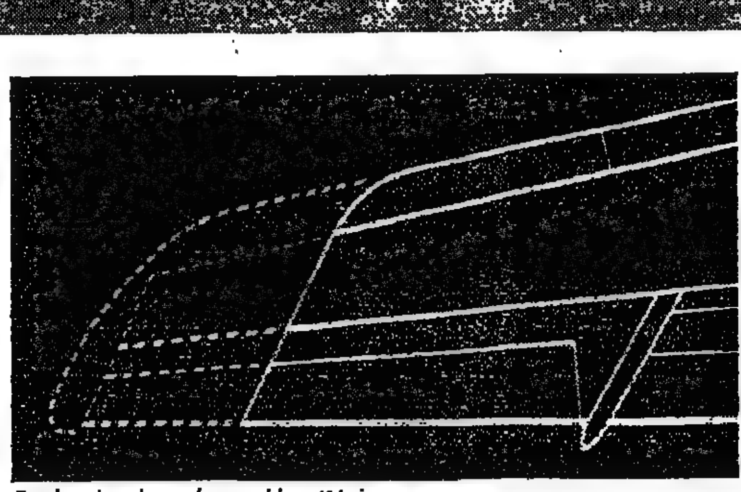
One way is to have longer wings that reduce drag and thus cut fuel use. And all jetliners of the future will surely follow that approach.

Extending an existing jetliner's wings, however, would involve costly and time-consuming structural redesign. Except in the case of the Lockheed L-1011 TriStar.

Coming versions of the L-1011 will have a wingspan stretched nine feet.

The advanced technology of the L-1011 makes this possible. An exclusive system of Active Controls will reduce the structural loads on the extended L-1011 wings.

This Active Control System will also help give the L-1011 an even smoother ride through gusts and turbulence.



Each wing lengthened by 4½ feet.

The longer wings and Active Control ailerons, due for delivery in 1980, will join a unique family of L-1011 advanced features. Among those features are:

The exclusive Direct Lift Control System — It provides a more precise and responsive controllability on the glide path during the approach to landing.

The exclusive Flight Management System — Now in service, it can automatically control throttles for the best fuel efficiency.

The Flying Tail — The L-1011 is the only wide-bodied jetliner with a Flying Tail that gives the pilot better control throughout flight.

The exclusive Autoland — This system can take the L-1011 down through bad weather, automatically landing the plane more smoothly than a pilot could. For example, the L-1011 can land at major airports such as in London, Atlanta, Denver, Washington, D.C., and San Francisco, when all other wide-bodied jetliners are being turned away.

The L-1011 TriStar. World's quietest, most comfortable, most advanced wide-bodied jetliner... the one that can today incorporate the technology that others will have tomorrow.

The Lockheed L-1011 TriStar.

Fierce battle for engine markets

THE WORLD aero-engines *business is now one of the* most fiercely competitive elements of the overall aerospace scene. The business is vast. Of the total world market for new airliners of over £40bn through the 1980s, the engine share is likely to amount to at least one-third, or around £15bn. The "big three" manufacturers, General Electric and Pratt and Whitney, both of the U.S., and Rolls-Royce, are all ready with new designs for the coming generation of airliners, and their combined actual and potential investments in those ventures will amount to well over £2bn.

The feature of the engine business is its long-term nature. It can take anything up to ten years before an engine company sees any profitable returns on its investments, and as a result the business not only requires enormous commitments of human, physical and financial resources, but also the patience to endure the long time-scale between launching a product and securing any financial rewards.

Technology

Because of the heavy research and development costs involved — anything up to £500m for any single new type — the number of new engine types is severely limited, and where possible all the major manufacturers focus their efforts on the evolutionary improvement of existing propulsion concepts, *in terms of lower* noise, fuel consumption and pollution, rather than seek dramatic but expensive new breakthroughs in technology.

Another feature of the engine scene is that the major airframe builders now offer each type of aircraft with a choice of engines. Thus, airlines can choose any one of the products from the "big three" for the particular range and payload performance desired, and some significant differences in choice are emerging. For example, the new Boeing 767 is being bought by United with Pratt and Whitney JT9D-7R engines, but both American and Delta are buying it with General Electric CF6-80 engines. Rolls-Royce may still win a contract, however, with its RB-211 Dash 524. It is talking with several airlines who are interested in 767s with that power-plant.

Rolls-Royce is planning to spend upwards of £500m on new civil aero-engine programmes *through the 1980s to secure its* place in the market through to the end of the century and beyond. While it does not pretend that it can win the lion's share of the market, it nonetheless aims to increase its share to about one-third of the total, or some £5bn throughout the decade ahead.

The emphasis at Rolls-Royce continues to be primarily on development of the RB-211 family in all variants. The RB-211 ranges from 30,000 lbs up to 55,000 lbs thrust, with capability of going beyond that to 60,000 lbs, if aircraft emerge requiring that kind of power. *Basic members of the family* include the Dash 22B of about 40,000 lbs thrust upwards, and the Dash 524 of about 50,000 lbs thrust and upwards, both used in versions of the Lockheed TriStar, while the Dash 524 is also used in the Boeing 747 Jumbo jet.

Another new variant is the Dash 535 of 36,720 lbs thrust, which has been chosen by both British Airways and Eastern Air Lines of the U.S. for use in the new Boeing 757 twin-engined short-to-medium range airliner This is the first time that a new Boeing jet airliner programme has been launched with a foreign engine. The initial flight *is planned for 1981, with entry* into service in 1983. Work on the RB-211-535 is well advanced at Rolls-Royce's Aero Division at Derby, and engine testing begins *this year. Both Boeing and Rolls-*Royce are hopeful *of* an eventual market for upwards of 1,000 aircraft in this field, involving over 3,000 engines including spares.

So far as the Dash 524 is concerned, the aim is now to push *its power upwards* beyond 50,000 lb thrust, towards 55,000 lb and possibly even beyond. This engine is aimed primarily at the Lockheed Dash 500 TriStar, and at the Boeing 747, with particular emphasis on later versions of that aircraft, with greater ranges and bigger payloads. Most airline executives believe that the 747 will eventually become a 500-600 seater, and perhaps eventually a 1,000 seater, with a double-deck fuselage. In that case, power-plants of 60,000 lb thrust or more will be needed. Rolls-Royce does not intend to be left out of that battle.

Export deliveries of the RB-211 family to date total well over £550m, covering over 660 engines, and the engine is the biggest of all current UK aerospace export programmes. Rolls-Royce turnover on the RB-211 is now running at over £130m a year, and the programme provides employment for over 25,000 workers both at Rolls-Royce and in equipment and component suppliers throughout the UK.

Another major new engine under development by Rolls-Royce is the RB-432, in the 16,000-18,000 lb thrust class, aimed mainly at new types of short-haul twin-engined airliners, such as the proposed Fokker Super F-28. Project definition has continued *throughout the past year,* and talks on collaboration with the Japanese are still under way. Joint UK-Japanese surveys have shown that a market for up to 1,200 RB-432 powered aircraft could emerge by the end of the 1980s, but full-scale development is not likely until orders have been won.

Existing

In the lower-thrust bracket is another new engine, the RB-401, of 5,500 lb, designed for the new generation of business and executive jets, where low fuel consumption and less noise are as vital as in bigger airliners. Work continues. But, as with the RB-432, full-scale development must await firm buyers.

But these Rolls-Royce engine programmes leave a gap in the "*thrust spectrum,*" between the 18,000 lbs of the new RB-432 and the 30,000 lbs of the RB-211-535, which Rolls-Royce has as yet no plans to fill. This gap is currently occupied by a Franco-American engine, the *CFM-56, and Rolls-Royce is well* aware that this could mean giving away a part of the booming civil markets of the future. But it must accept this, because with all its existing programmes, it will have its hands full financially and technologically through the 1980s. As it is, the RB-211-535 alone is expected to cost about £250m, while the RB-432 and RB-401 together will probably cost about the same. If the continued development costs of the Dash 524 and Dash 23 versions of the RB-211 are also included, the company's civil engine development programmes could amount to well over £500m.

General Electric, of the U.S., in 1978 had its best year for the past decade, with firm orders for over 190 of its CF6 series of engines for use in European A-300/A-310 Airbuses, DC-10 tri-jets, and Boeing 747 Jumbo jets. The total value of this business was well over £500m.

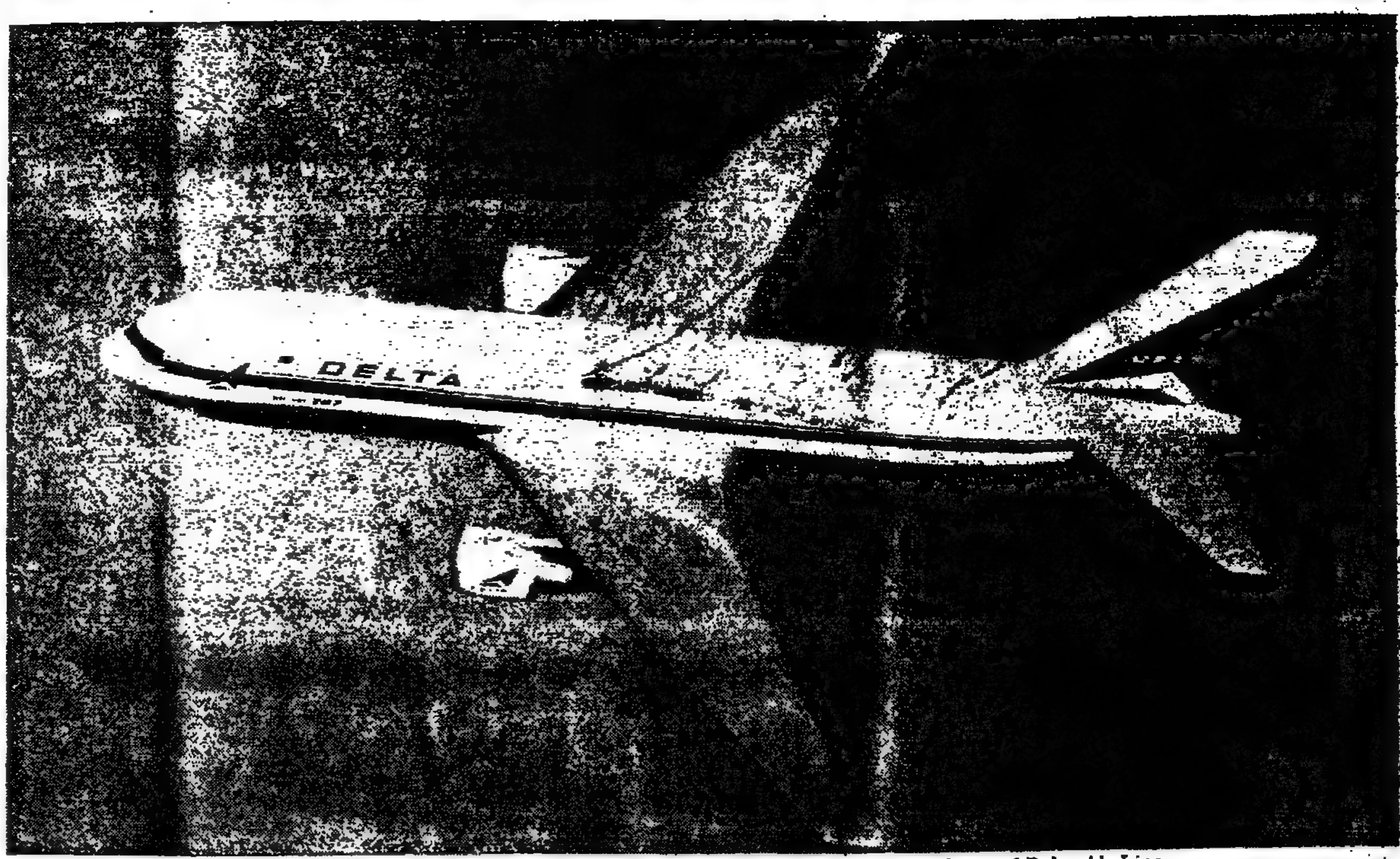
GE offers a family of engines, ranging from the CF-34 of about 8,000 lbs thrust for feeder-liner aircraft, up to the big CF6 series with thrusts up to 54,000 lbs—the latter being competitive with the Rolls-Royce RB-211. Currently, 59 airlines have ordered or are operating the CF6 in various versions, and as at January 1, 323 wide-bodied jet liners were flying with GE engines. To date, including spares, over 1,300 CF6 series engines have been built. Further development of the CF6 Series is planned, probably up to 60,000 lbs thrust or more to meet likely "stretches" of the wide-bodied jets, and particularly of the Boeing 747.

GE is also associated with another major new engine, the CFM-56, in the 22,000-27,500 lb bracket, which is the product of a new consortium, CFM-International, jointly owned by GE and Snecma of France. The engine is aimed at a wide range of civil and military transports, including airliners in the 115-160 seat category. Possible outlets for it include any Joint European Transport venture that Airbus Industries may develop, the planned Fokker Super F-28, and as a replacement for existing engines in both the Boeing 707 and McDonnell Douglas DC-8 four-engined jets. The first engine, of 24,000 lbs, is due for certification this October, and it should be in service by 1981. Higher-powered versions, up to 27,500 lbs, will be developed through the 1980s, with the most powerful model, becoming available for service in 1986. A smaller version, the DR-18, of 18,000 lbs thrust, is planned, and this will be competitive with the new Rolls-Royce RB-432.

Pratt and Whitney, a division of United Technologies, is the third member of the "big three." Its engines include the JT8D, the most widely used commercial engine in the world, in such aircraft as Boeing 727s and 737s and McDonnell Douglas DC-9s. During 1978, over 570 JT8D engines were delivered, bringing to more than 9,000 the number of JT8Ds delivered to over 150 operators world-wide. P and W is now working on a derivative, the JT8D-209, of 18,500 lbs thrust, which powers the new McDonnell Douglas Super 80 version of the DC-9. This is substantially quieter than the earlier JT8D, and has improved fuel consumption and less emission pollution. The JT8D-209 is being studied for possible application in other proposed new commercial aircraft while its performance, weight and price make the re-engining of existing types such as the DC-8, 707 and USAF KC-135 a practical alternative.

Pratt and Whitney also makes the JT9D, now in service for more than 46 airlines world-wide on the Boeing 747 and the McDonnell Douglas DC-10 Series 40. The largest version of this engine the 59A/70A in service gives over *53,000 lbs thrust.* In addition to the 747 and DC-10, the Airbus A-300 is being offered with this engine to give operators improved fuel economy, shorter take-off distances and other benefits. Another version, the 7Q, offers growth to 56,000 lbs thrust with even further reduced fuel consumption. This engine, already ordered by several airlines in the 747, will [illegible] aircraft to fly [illegible] nautical miles with [illegible] passengers.

Pratt and Whitney is continuing to work with Motoren- und Turbinen Union of West Germany, and Fiat of Italy on the "new technology" JT-10D engine, designed to span the thrust range from 25,000 lbs to 35,000 lbs. It will thus be a competitor not only for the Franco-U.S. CFM-56, but also for the Rolls-Royce RB-211-535. *Development work* has been under way for some time, and certification is set for late 1981, to be compatible with the production schedules of the new generation of aircraft. P & W has 83.2 per cent of the programme, MTU 12.8 per cent and Fiat 4 per cent.



The new Boeing 767 twin-engined "semi wide-bodied" jet airliner, in the colours of Delta Air Lines, which has ordered 20, with options on a further 22 aircraft

THE ARTS

aris Opéra

Lulu

by RONALD CRICHTON

Teresa Stratas and Yvonne Minton

nd so, after years of fuss frustration, rumours and nterrumours, of diplomacy delicate negotiation, Alban g's second opera, *Lulu*, has n performed in its entirety the version completed by edric Cerha. Now we can n from the tortuous back-und to the work itself, for-ting the makeshift truncated sion in which the third act s given for so long. But first salute to Rolf Liebermann, ad of the Paris Opéra, to ose determination the suc-sful premiere on Saturday is in great measure due. In e face of the impression made the completed third act and the warm welcome given to ulez, Chéreau and the singers, seems most unlikely that the gal action entertained by the erg Foundation to prevent rther productions could go read.

The difference made by the mpletion affects not only the ird act but the whole work, d especially the principal aracter. When he died Berg ad composed all the music some minor details of the last ct excepted) in short score but ad not finished the orchestra-ion. The old way of doing ct 3, with the first scene mitted and the last one mimed o two movements from the *ulu* Suite arranged by Berg imself for concert use, bscured the symmetrical plan f the whole which Berg did not o much impose on but drew ut of the two consecutive *ulu*-plays by Frank Wedekind rom which *he took his libretto.*

Of the three masters of the Second Viennese School Berg, as *Wozzeck* has long shown, is he most accessible to the general public. But though he less rigorously complex than Schoenberg and less mirily concentrated than Webern, behind Berg's wealth of lyrical feeling and hypersensitive morbidity there lies a passion for intricate for-mal structures, numerological schemes, palindromes and so on. In his new book *The Music of Alban Berg* (Faber & Faber,) Douglas Jarman refers to his "apparently para-doxical fusion of technical calculation and emotional spontaneity." Dr. Jarman's volume, not a *biography but a* detailed analytical study of the music, contains much of interest, *especially to those* ly to see the complete *Lulu*. charts setting out Berg's *of closed forms* (on a larger , more complicated scale than in *Wozzeck*) and his use of reprise in structing his symmetrical on.

Berg placed his climax, the point of no return for Lulu, in orchestral interlude in the form of a palindrome, in the middle of his second act, where the first Wedekind play ends and the second one begins. He cut and tightened the text, devising a scheme whereby Lulu's career, having taken a downward turn, mirrors the upward curve by doubling the *roles of the three husbands she* destroyed in the first part with three clients she picks up as a *prostitute during her miserable* last hours in London.

Now the tables are turned on *her with a vengeance.* The second client, a Negro, kills her fourth husband, Alwa. The third client, none other than Jack the Ripper, knifes her off-stage. On the way out he does the same for her devoted female admirer the Countess Geschwitz. London is reached by way of Paris and a brilliantly written scene (staged for the first time on Saturday) of ensembles and increasingly tense duets while Lulu is black-mailed with threats of disclosure to the police, *still after her for* the shooting in Germany of her *third husband.*

Patrice Chéreau has admitted to finding in Berg's score "ex-*treme violence.*" He and his collaborators Richard Peduzzi (sets) and Jacques Schmidt *(costumes)*, the team for the centenary *Ring* at Bayreuth, have abandoned the usual 1900 setting for *Lulu*. In its place, Nazi-style late 1930s architec-ture in black and grey marble, cold, menacing and monu-mental, like a bank designed by a Prussian Gordon Craig. Cos-tumes are mainly black and grey as well. Some of the men are almost indistinguishable.

How many of the audience un-familiar with *Lulu* immediately identified the Acrobat, I wonder?

The overbearing sets dwarf the characters. Never in my experience of this opera have Dr. Schön and his son Alwa, the dubious old Schigolch or the acrobat seemed so individually insignificant. In two of the scenes designer and producer create more problems than they *solve. The glass walls of the* theatre dressing-room, which allow an enticing glimpse of *what appears to be the Opéra's* Foyer de Danse, also compel Lulu to make Dr. Schön write the letter breaking off his engagement in full view of the theatre staff and some of the audience.

The London attic where Lulu is murdered becomes an under-ground lavatory, apparently un-attended, with a long flight of stairs leading down from the street and a dark corner where the clients can be taken. Here Chéreau goes against the book. Instead of being doubled by the player of the *Medical Professor* of the first scene (Lulu's first husband), her first client off *the streets is played by a midget* already briefly glimpsed in the prologue. The only reason for upsetting *Berg's plan seems to* have been to leave Toni Blankenheim, who plays the *Medical Professor, free* to sing the part of Schigolch as well —a bit of cheese-paring inexplic-able in an enterprise on this scale. That the episode with Lulu and the midget is touch-ingly carried off doesn't excuse it.

Anything less like the usual sex-pot than the Lulu of Teresa Stratas is hard to imagine—tiny, spare, a sparrow with large eyes and features that can harden when necessary, frowsty hair and, one dress excepted, inconspicuous clothes. Not a man-killer, as Chéreau explains, but a woman fated to attract *self-destructive men. Miss* Stratas, who was said to have been unwell at the first perform-*ance, though she* showed both energy and grit, sang many phrases in the lower and middle registers with the charm and intelligence one would expect, but like other singers of the old, incomplete version was forced to deliver the highest parts (the first scene of act 3 contains some new and hair-*raising examples)* in what can only be described as a squeak. Though the lines of spoken German gave Miss Stratas no difficulty, her sung words were barely audible—a fault that must be put right.

Franz Mazura's glacial Jack the Ripper is so striking that his Dr. Schön earlier in the even-ing seems like a preparatory study—it would really be better the other way round. Yvonne Minton's potentially excellent Geschwitz is not yet quite in focus. Hanna Schwarz as be-*sotted Schoolboy and com-*plaisant Page refuses to be squashed by her surroundings. As the Banker, Jules Bastin bestrides the money-ensembles in the Paris scene when shares start to crash. Robert Tear makes his mark both as the painter and as the negro, Gerd Nienstedt's nimbleness as the acrobat belies his unathletic appearance. As Alwa, Kenneth Riegel sings surely but dryly. *Likewise, in three small roles,* Helmut Pampuch.

In the orchestra pit Boulez brought his remarkable power of clarity to the outlining of the structure and filled those out-*lines with commitment* and colour. Only in the second act did the expositor at times (not, *however, in the central inter-*lude) threaten to take over from the interpreter. In the last *scene of* the third act the passion and force of both music and performance were deeply moving. Faults and all, it was a heroic evening—rarely since the days of Meyerbeer or the *Paris version of Don Carlos* can this ancient institution have been so signally the centre of the operatic world.

lasgow Citizens'

Macbeth

The most distinctive temple theatre in the land has nporarily discarded its house le in favour of a casually essed *production by* Giles vergal of Shakespeare's litest tragedy. Performed der working lights, with class-om furniture and well worn nches, the overall effect is as vastating as any of the eatre's more baroque concoc-ns. Comparisons have been de in *short sighted corners of* Scottish Press with Trevor nn's simple chamber ap-oach. But the real model—indeed it is a model—is Wil-m Gaskill's spine-tingling 66 Royal Court producton, ven in a full glare of white ht with minimal properties.

Like Gaskill, Mr. Havergal ows the imagery of the play speak for itself. There is t one sound effect all evening, at of the knocking at the rter's gate (repeated in Lady acbeth's sleep-walking scene). o crowns, no robes, no appari-ons. The clutter of kingship oves as illusory to Gerard urphy's vocally athletic young ro as does the tantalising igger. Anne Righter has ritten of Macbeth as an actor essed in borrowed robes, and is view of the play is start-ngly corroborated as Mr. urphy comes down stage, laying his arms as if to eclare himself "a poor player at struts and frets his hour pon the stage." And what eapons do he and Macduff ke up at the end? Stage braces, normally used to prop up flat scenery.

It has long been an *unfair* accusation levelled at the Citizens that they do not know how to *speak verse.* Well, Albert Finney and co. at the National, not to mention the current Young Vic mob, are thoroughly put in the shade by this piece of work. There is the odd weak link in the acting strength—Malcolm and Macduff do little to relieve the tedium of the notorious England scene —but the rest of the cast is admirable, audible, bright and intelligent.

The full 1623 text is given, minus only the unlamented Hecate scenes, and actors not on stage lounge at the side in full, undisconcerting view, reading, smoking or just *listening. The cast* is all male, the actors playing Lady Macbeth, Lady Macduff and the Gentlewoman doubling as the witches. There is nothing cheap or coyly transvestite in this tactic. David Hayman's Lady Macbeth, simply attired in a white T-shirt and rehearsal dress, is a brilliant inter-pretation, combining *taut* musculatity with tremendous verve of delivery and the *fluttering gestures of a* distraught hostess when the party goes awry.

The production is full of inviting physical detail. After Duncan's murder, Malcolm and Donalbain fly harum scarum through the stalls; the murderous couple cling terrified to the theatre's whitewashed back wall during the *rapid* stichomythia of "I have done the deed" etc: the murdered *Banquo* lies downstage while the feast he fails swings into upstage view; the entire banquet scene, in fact, has great fluidity, culminating in Macbeth's shout of "It will have blood."

This is a production of which Peter Brook in his current mood would be proud. Mr. Havergal has provided both a perfect introduction to the play for young audiences and, in Gerard Murphy, the best young Macbeth I have seen.

MICHAEL COVENEY

Carlisle Theatre Club public appeal

The Green Room Theatre Club, *Carlisle, has been forced to* launch a public appeal to com-plete work on a new 150-seat theatre because £12,000 worth of labour promised by the Man-power Services Comission was not forthcoming.

Riverside Studios

Music Projects

by NICHOLAS KENYON

Revolution is at the heart of Richard Orton's *Brass Phase*, which was given its London premiere at the Riverside Studios on Sunday. *This is* no Marxist tract, however, but a nostalgic phantasy for 12 brass *players on revolving chairs*, each surrounded by four music stands, filling a roughly circular space. The players rotate on their chairs, sometimes freely, sometimes unanimously, while the conductor directs from four separate positions around the circle, timing two sections by the periods taken to walk and run round the players. Perhaps we might have heard more had we too been allowed to wander around the circle as it was, the aural result of what the com-poser called "static choreo-graphy" was negligible. The music itself was a free-ranging phantasy on the associations of brass band music, a fragmented circus fanfare, a half-heard hymn-tune, breathing, noises with clarinet mouthpieces—a pale reflection of a strong northern culture, a weak echo from Grimethorpe.

The first half of this concert by Richard Bernas' enterprising group Music Projects/London contained pieces by Elliott Car-ter and Rolf Gehlhaar, plus Robert Saxton's 1975 *Reflections of Narziss and Goldmund*, heard last year at the Round House. It's full of this composer's dis-tinctively attractive sounds (rhapsodic oboe solo over glassy strings and rippling celeste), a rather narcissiste reflection indeed. But this was an uneasy performance, too nervy to catch the languorous atmosphere of the piece. Rolf Gelhaar used two *similes to describe his Camera Oscura*, one of which was that of a beam of light flashed at ran-dom around a dark room—but for me it revealed nothing except all the clichés of brass ensemble writing. The room was empty; perhaps that was the point.

In the absence of programme notes, Orton, Saxton and Gehl-haar introduced their own works impromptu, briefly and some-times uneasily; but this worked well, a welcome change from pre-packaged, pre-concert "lec-tures" on modern music.

The Venue, SW1

Mama Chicago

by KEVIN HENRIQUES

Mike Westbrook has been per-forming *Mama Chicago*, his ex-tended composition cum jazz cabaret, since July last year when it opened at the Open Space in London before going on to the Edinburgh Festival. On Friday it returned to London for what is likely to be its last presentation in the capital (Westbrook is a prolific com-poser, never content to wallow in past glories, always working on adventurous new ideas).

Like many of his pieces this incorporates many facets of music, not solely jazz. The promise was that Friday's per-formance would showcase the work in the most suitable ambience, namely a cabaret set-ting. Alas The Venue (formerly the vast Metropole Cinema, minus the stalls and with tables placed on the now unraked floor) could hardly be described as intimate, even for a football match.

Mama Chicago is a words and music commentary on big city life, the words capturing the hard, urban atmosphere ex-emplified when Phil Minton sings of "this graveyard of a city." But there is no linking thread. The piece sprawls markedly, both texturally and musically. To satisfactorily con-vey its meaning and intent the sound needs to be better balanced and projected than it was on Friday when too *often* the so-important words were un-intelligible or drowned by the band. *Certainly the wit and* irony were lost and the audience was never committed or in-volved enough to be gripped.

Having the six-piece band stuck rigidly on stage behind an *array of microphones and far* removed from the audience at the tables certainly did not lead *to that feeling of relaxed in-*timacy essential to any cabaret, jazz or otherwise.

During this disappointing evening there was, however, much music to relish—most of all the fiery playing of saxists Chris Hunter and Pete Hurt, as well as the versatility of Kate Westbrook both as musician (tenor-horn and harmonica) and as *feme fatale chanteuse*. Mike Westbrook gave only a few brief glimpses of his moody piano playing, which was a shame.

Television

Man's inhumanity to man

by CHRIS DUNKLEY

Current affairs programmes, it was suggested in this column last week, may well be greeted by many viewers with indif-ference and dislike not only when they are badly made but even more when they are well made. Ineffectual super-ficial *programmes may* cause passing annoyance, but power-fully effective analytical pro-*grammes showing the serious-*ness of society's ills and demon-strating that there are no easy answers, no blacks and whites, few real heroes and villains, but increasingly difficult choices be-tween various evils, may well induce much deeper despon-dency in the viewer.

To go from the writing of that column straight to a week at the 19th Monte Carlo Inter-national Television Festival was to have the theory powerfully reinforced and "internation-alised."

Not that the festival was wholly demoralising. Admittedly the British drama entries (BBC's *Lost Boys*, mistakenly listed as a version of "Peter Pan," and Granada's *Wings of Song*) got nowhere, while EMI somehow brought the AMADE-UNESCO prize back to Britain using an American production called *A Special Sort Of Love*.

However, the week ended with British broadcasters winning the Golden Nymphs for both the top "actuality" awards: ITN's *News At 10* for the best news report, and BBC1's *Panorama* for the best current affairs pro-gramme. For ITN this made the fourth year in a row that they had carried off top honours. In 1976 they won with a report *from Vietnam, in 1977 with a* report on the cod war, last year they were commended (no *Nymph was awarded) for cover-*age of the National Front riots in Lewisham, and now they have won again with a report on an Ethiopian air attack on Eritrean guerrillas.

The film, showing the bomb-ing from close quarters and the desperate conditions in Eritrean hospitals, was made by reporter Jon Snow, cameraman Alan Downes, and sound man Don Warren.

Panorama won its award with a programme made by producer Christopher Olgiati and reporter Philip Tibenham called "The Friends who put Fire in the Heavens." Transmitted in Britain last October, it told the extraordinary story of the West German rocket company OTRAG which has set up business on a 40,000 square mile site in Zaire and with the help of former V2 specialists has developed a spy satellite system for sale to all comers.

It is, of course, cheering to see British broadcasters achiev-ing such international success. *Yet the main effects of watch-*ing day after day of news and current affairs programmes *from* countries all over the globe was one of growing sad-ness, mainly on account of the content, although technique too did frequently leave a lot to be desired.

The repetitive nature of prob-lems and pains, misery and murder, famine, war and all *forms of inhumanity illustrated* by these programmes is on its own enough to cause deep dejection. It is not particularly *enrapturing* to sit at home and watch even the highly selective collection of real-life horrors so often offered by domestic tele-vision.

It is much worse to sit and watch a French news report on Christians being shelled in Beirut, followed by a British report on the training of *Nkomo's guerrillas*, followed by ITN's film of bombing in Eritrea, followed by Spanish *footage of carnage in Nicaragua*, followed by an American report on Palestinian suicide terrorists, followed by a Hungarian pro-gramme about war in the Sahara, followed by a dozen other depressingly similar re-ports. The image of mankind produced by such an accumula-tion is dark and sinister.

Almost as bad is the result of the occasional fortuitous juxtaposition. For instance, on Thursday morning a Belgian programme used the town of Charleroi to illustrate the crisis in the Walloon economy and explain the growth of unemploy-ment. In the afternoon, an *American entry illustrated* the activities of the Greenpeace con-servationist organisation, show-*ing volunteers in rubber* ding-hies on the high seas placing themselves as human barriers between Russian harpoon guns and whales. The Greenpeace people put across a powerful *argument for the ending of all* whaling before the animals are wiped out. At no stage did they mention the loss of jobs this would cause among Russian and Japanese whaling fishermen and workers in associated industries.

Each programme elicited great sympathy and each appeared to have right on its side, the first bemoaning unemployment and the second in effect calling for *more of it: enough to make any* viewer despair.

As the days passed and the screens continued to show the armies and the police forces, the "guerrillas" and the "ter-rorists," the "freedom fighters" and the "gunman" killing one another, there were three phases of reaction.

At first one was sickened by the evidence of such widespread superstition, hate and blood-shed, and unhappy that tele-vision in all countries should seem so keen to seek it out. *Then came the thought that* to sit through days of news and current affairs programmes literally from morning till night was to contrive at an artificial intensification which could in no way reflect reality. Finally, however, came the thought that it was not tele-vision which created all these wars and other outrages, and that although the festival con-centrated them in one place, *many of them actually do con-*tinue simultaneously in different parts of the world not for days but for years.

In other words, since no national television service would ever dare to give its audience what would be needed to show the unhappy aspects of the world as it is—an undiluted diet of such material without any quiz shows, soap opera, sport or whatnot—a television festival such as Monte Carlo's is probably the first place in the world where one can go and find described in vivid pictures and sound the sort of horrors which are, indeed, occurring in *various parts of the world all the time.* Such an experience makes what Jonathan Swift *must have intended as satirical* exaggeration look instead like ludicrous understatement.

There were moments of relief. The Russians showed some fascinating footage of cosmonauts working in weight-less conditions. ITN entered in the long news report section its 20-minute "reconstruction" of the Hungarian Circle bank swindles. Japan showed a pro-gramme about the "new" China which was certainly quite different from those familiar propaganda films about co-operative farms and the glorious militia, and is only, I suspect, a trailer for what television will soon be showing us of China's new image. A five-year-old Chinese girl who burst spon-*taneously into song* and dance for the camera would, by now, be under a watertight contract *if she lived in the West*—which is not to deny her charm. But such moments were rare.

More commonplace were examples of techniques which we should be grateful are not (yet) used (much) in Britain. It now seems almost standard practice in many countries, if you feel that the viewers' *heartstrings are not being* tugged hard enough by, say, slaughter in Nicaragua, to stick a bit of Tchaikovsky at his most sentimental on the soundtrack.

Furthermore, commentaries often make claims which the pictures not only fail to support but sometimes flatly contradict. *This reached its absurd climax* in a Yugoslav film about Cam-bodia in which merry singing on the soundtrack and remarks of the "Here is a happy 12-year-old" variety contrasted starkly with the pictures of sexually segregated labouring by dour and fearful looking black uniformed masses. In the entire film only top dog Pol Pot laughed: and he laughed all the time.

Since different categories of programme are screened simul-taneously in separate viewing rooms *at this festival* it is im-possible for one viewer to see all that is on offer. Having decided to concentrate on news and current affairs (and been convinced that our best is, as the awards suggest, as good as and better than anyone's) I saw little of the drama, and cannot judge how our domestic stan-dards compare with the inter-national offering at Monte Carlo.

Luckily I did, however, see the two Gold Nymph drama winners: *How To Get Daddy In A Fir* from Czechoslovakia, and *Black and White Like Day And Night* from West Germany.

The current affairs they can keep — at least until BBC1 scraps its own in favour of non-stop chat shows. Then a few imports might come in handy. Saddening though such pro-grammes may be, to know is better than not to know.

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Financial euthanasia

AS THE extraordinary boom in the gilts market continues, market explanations are to be treated with caution. It is clear that the main cause of the upheaval is a self-feeding change of mood among domestic investors, and reports of heavy buying by men with thick foreign accents or snow on their boots are no doubt exaggerated. All the same, these reports are not pure invention. There has been investment from overseas, and there has equally been some modest Bank of England intervention in the exchange markets to finance this demand. These are the symbols, at least, of self-defeating policies.

Absurdity

The simplest way to demonstrate the absurdity of existing policies is to assume, for the sake of argument, that all the current rumours are exactly true—or, more plausibly, that the more modest inflows actually experienced in recent days are sustained long enough to reach an important total. The results of such a flow would be unequivocally to damage the invisible account of the balance of payments, and either to undermine monetary control, or to damage the growth of manufactured exports, or both, according to the intervention policy followed. In short, the authorities have managed to devise a system of controls which is so preoccupied with the problems of weakness that an access of financial strength actually damages the real economy. This is an absurdity which must be tackled.

There are two fundamental problems here: exchange controls, and excessive reliance on long-term funding. Each is harmful in itself, and they form a poisonous combination. We argued the case for an urgent relaxation of exchange controls very recently, and the arguments can be restated briefly. They arise simply from the fact that if rising North Sea oil production is to be used partly to secure an improvement in the current account—or in other words, if a corresponding deterioration in the non-oil account is to be avoided—then that improvement must be financed.

Guidance

Finance for an improved balance of payments can be provided in one of three ways, very broadly. It can be provided by an outflow of private capital of domestic residents, an outflow of non-resident capital, or an outflow across the exchanges through central bank intervention or foreign aid. This is well understood in countries which have a tradition of export-led growth. The Germans and the Japanese, for example, are ready to provide concessionary export credit, to intervene in the exchange markets, and actively to encourage the outflow of private capital—indeed, some of the funds seen in London this week are reported to be flowing from Japanese pension institutions under official guidance.

In this country the rules are very different. The outflow of capital owned by domestic residents is forbidden; intervention in the exchange market is reluctant, for fear of undermining monetary control, while as a final absurdity Finance for Industry, a group part owned by the Bank of England, is taking the opportunity of improved conditions to encourage capital inflows by launching an international loan. Meanwhile non-resident capital is being attracted inwards by the level of yields on Government stock. On present trends, the capital account will be in substantial surplus, and the current account in deficit in spite of North Sea oil.

The foreign demand for gilts brings funding policy into the balance of payments picture, but the effect of capital flows across the exchanges is only part of the story. The payment of high coupon yields across the exchanges is a burden on the invisible account for as long as the stocks are held; and the regime of high interest rates hampers British industry.

Hedonism

The fact which seems to have escaped the attention of Ministers is that a strong underlying improvement on oil account is bound to make sterling uncomfortably strong in real terms, unless it is offset on the capital account.

Even wage moderation would simply secure the same result at a higher exchange rate and with lower inflation.

If no allowance is made for this access of strength in official exchange and monetary policies, the results are as predictable as the laws of physics: a deteriorating non-oil balance, probably as a result of rising consumption coupled with falling manufacturing output, as experience is already showing. If the North Sea were inexhaustible, this might be a policy of rational hedonism. With oil production due to peak within the next decade, such an approach is more like euthanasia.

The new war in Vietnam

TEN DAYS after the start of the Chinese invasion of northern Vietnam, it has become clear that the operation is on a considerably larger scale than at first appeared likely. The Chinese Government continues to stress that it is engaged on an essentially short-term punitive enterprise, but from the comments of a number of Chinese leaders it is now apparent that they do not expect it to be over in a matter of a few days. On the contrary, one such comment implies that it might last several weeks longer.

Expansionist

The factors which provoked China into carrying out the invasion are not seriously in doubt. First and foremost was Vietnam's invasion last month of Cambodia; quite apart from the fact that it represented a blow against one of China's allies, and thus constituted a serious loss of face for Peking, it was bound to be interpreted as an expanionist move by Vietnam in a region in which the Chinese must consider they have special interests, more especially since Peking has been giving new emphasis to its role on the world stage. In addition there has been the expulsion from Vietnam of people of Chinese origins, which can only have provoked a regime which has been strengthening its links with the overseas Chinese.

Less experienced

Just what the Chinese expect to achieve by their invasion remains obscure, however. Vice Premier Deng Xiaoping has admitted that there may be a link between the Chinese military operation in Vietnam and the Vietnamese military operation in Cambodia, but he has not offered a withdrawal from Vietnam if the Vietnamese will withdraw from Cambodia, nor, conversely, that China will continue fighting until Vietnam does withdraw from Cambodia. On the other hand, there has been a call from Peking for negotiations to end the fighting, which implies that the Chinese do have some sort of explicit bargain in mind.

It seems doubtful whether the Chinese can very rapidly compel the Vietnamese to accept any such bargain by force of arms. Vietnam has one of the toughest and best equipped armies in the world, and while there is little reliable information about the details of the campaign now under way, it appears that Hanoi has not yet felt compelled to throw its best units into the fighting. China's population dwarfs that of Vietnam, but its troops are less well equipped and much less experienced. By sheer weight of numbers, the Chinese army can no doubt in time inflict substantial losses on the Vietnamese forces, but even then it is not obvious that China can succeed where the United States failed after many years of fighting.

That kind of time-scale is evidently not what the Chinese have in mind, however. Given their extraordinarily ambitious plans for economic development, with massive imports of capital equipment from the outside world, the last thing they need is a long-drawn-out conflict with Vietnam. Moreover, the one thing they must avoid is provoking the Soviet Union into getting involved on a significant military scale. Moscow has publicly condemned Peking's invasion, but in practical terms it has so far shown commendable restraint, despite its recently-concluded alliance with Vietnam. But China cannot count on unlimited Soviet restraint: the longer the war in Vietnam goes on the greater the danger that the Soviet Union will intervene, either by stepping up supplies to Vietnam or by military activity on China's northern border.

Negotiations

The danger that the situation could get out of hand should not be underestimated. The Chinese may intend only to give Hanoi a shock, as a warning that it must act more cautiously in future and with more regard for Chinese interests, and then in a few weeks withdraw. But if the United States and the Soviet Union attach any real meaning to détente, they should use their best efforts to launch serious negotiations, either in the Security Council or through some third party, like Japan.

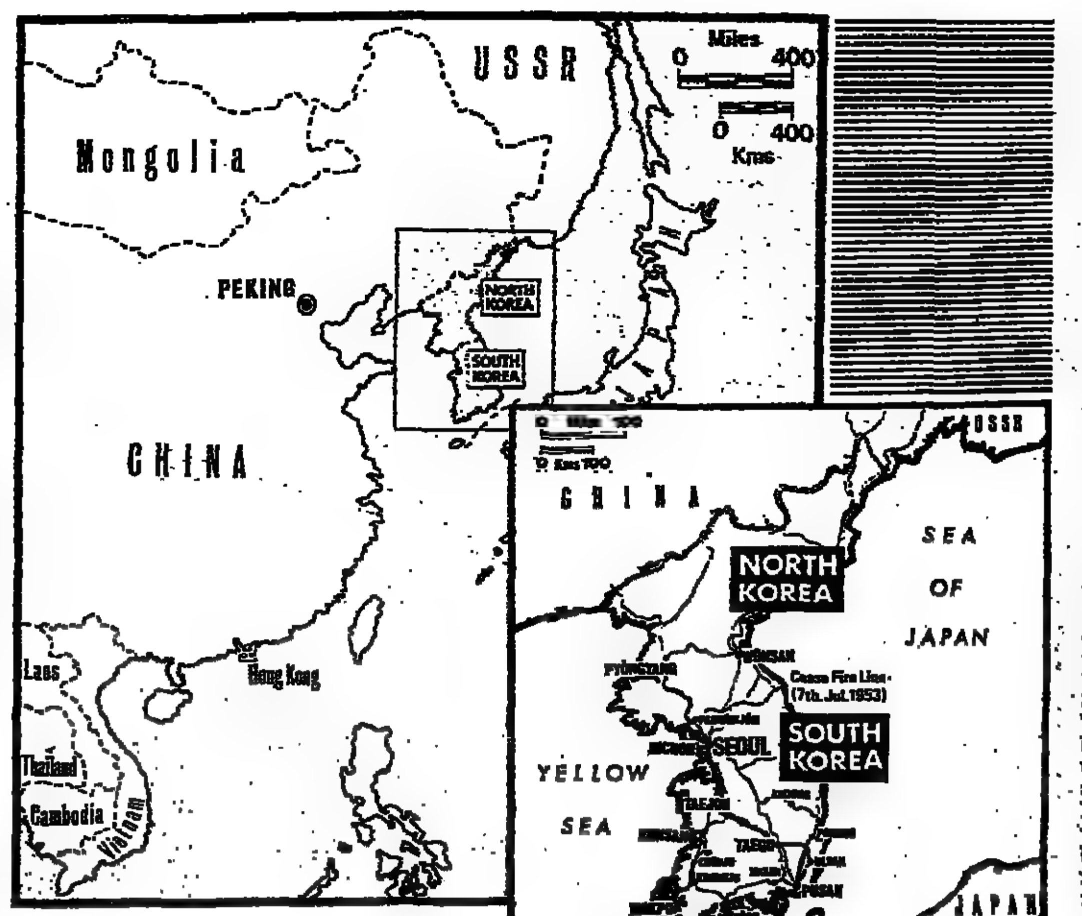
The faint signs of a thaw in Korea

BY CHARLES SMITH, FAR EAST EDITOR

WITH CHINA and Vietnam fighting it out along their mutual frontier and the U.S. apparently on the way to becoming an ally of China, traditional cold war (or even slightly less traditional detente) between Communist and non-Communist countries has begun to seem out of fashion in Asia.

The only exception is the Korean peninsula, where a classic post-World War II-style confrontation persists between the hard-line Communist regime of Chairman Kim Il-sung in the North and the rigidly anti-Communist government of President Park in the South.

North Korea, commonly believed to be the world's most heavily armed nation in relation to both population and land area, has shown signs of wanting to talk to its southern rival only twice during the 26 years since the end of the Korean war. The first time was in 1972 when a series of secret contacts between the two Governments led to the establishment of a semi-official "North-South Co-ordinating Committee" whose meetings were boycotted by the northern side after the first few sessions.



The second time was in January of this year when Pyongyang radio responded to an offer from President Park to begin Government-to-Government talks at "any time, any level and any place" by proposing a detailed timetable for the "de-escalation" of North-South confrontation, starting with the suspension of propaganda attacks (on February 1) and culminating with the convening of a "Pan-Korean congress" in October.

Last week, North Korea actually sent four delegates down to the military demarcation line between the two halves of the country and was able to induce a reluctant South Korea to field an equivalent team. The two sides spent 90 minutes discussing such things as the reopening of the hot telephone line between Seoul and Pyongyang and the date of their next meeting.

South Korea claims that the programme is essentially a "fake" designed to score propaganda points and perhaps to make Pyongyang look good in the Third World

The reasons why the South declines to take the Northern overtures at their face value are that the North is suggesting people-to-people contacts not Government-to-Government negotiations, and appears to intend issuing its own invitations to South Koreans to participate in the congress in October.

This means, says the South, that Pyongyang is merely trying to make use of President Park's opponents, some of whom would welcome an opportunity to air their criticisms of the President's authoritarian style of government. Another reason why the northern de-escalation programme might seem designed to score tactical points is that it calls for suspension of "hostile military activities" in March—a month in which the U.S. and South Korea had planned to stage a major military exercise in their half of the peninsula.

U.S. officials in Washington and Seoul clearly believe that the northern proposals are worth exploring and that the only way to do so properly may be to sit down at a table with Pyongyang's representatives and find out what they are after. They also believe that South Korea could appear to the uncommitted (and uninitiated) to be putting itself in the wrong if it fails to go along with the Pyongyang Congress offer or to come up with some acceptable alternative.

No one really knows why North Korea should want to start talking to the South. The assumption is that Chairman Kim is looking over his shoulder at events outside Korea. The U.S.-China diplomatic normalisation means that the Americans can now ask the Chinese to use their influence on Pyongyang to procure a peaceful settlement of the Korean question.

The North Koreans may wish to forestall Chinese pressures by appearing to be spontaneously interested in getting talks started. They are also, almost certainly, concerned about the situation in the U.S., where opinion seems to be shifting decisively in favour of the postponement, if not outright cancellation, of President Carter's plan for withdrawing troops from South Korea.

North Korea's armed forces are substantially stronger than those of the South both in numbers and equipment. The gap could be even bigger than is suggested by the figures in the table, judging by the preliminary results of an American intelligence survey which suggests that North Korean strength may have been under-estimated by 25 to 30 per cent. If the North Koreans are as strong as the U.S. now seems to believe the chances are that they might be able to seize Seoul (the South Korean capital which lies only 25 miles from the demilitarised zone dividing the two parts of the country) in a surprise attack.

The drawbacks, from the North's point of view, of launching such an attack would be that the Russians and the Chinese would disapprove, and that the U.S. might throw additional forces into Korea in an attempt to recapture Seoul. The chances of that happening, however, would be diminished if the North delayed its attack until after the completion of President Carter's withdrawal programme (assuming the programme goes ahead as planned).

If stalemate continued South Korea would almost certainly benefit. Southern GNP has been growing by between 10 and 15 per cent per year since the 1973 oil crisis and is now probably about five times as large as North Korean GNP (around $45bn in 1978 against the North's estimated $8bn-$10bn). The North spends a far higher percentage of its GNP on defence than the South. (Estimates range from 14 to 25 per cent, but a good guess is 20 per cent, compared with the Southern figure of around 6 per cent).

However the discrepancy between the overall size of the northern and southern GNP is now so great that net defence expenditures by the South as opposed to the percentage of GNP spent on defence, is now probably beginning to excede that of the North. It will take a long time before this results in the South being better armed than the North, and the time may never come when the South has a larger number of enlisted soldiers. The probability is, however, that the defence gap may start to close fairly rapidly from the mid-1980s onwards.

The current real Northern growth rate is believed to be around 6 per cent per year, but the economy suffers from bottlenecks in the shape of raw materials shortages and a seriously under-developed land and maritime transport system. It is not deficient in industrial capacity which accounts for an estimated 65 per cent of GNP, mainly in the heavy sectors. In order to eliminate the bottlenecks North Korea needs foreign exchange, which happens to be in very short supply.

South Korean research organisations specialising in North Korean affairs claim that the North has had a trade deficit during six of the past seven years. Exports in 1978 were worth approximately $630m against imports of $720m. They also estimate that North Korea owes western countries (including Japan) $1.24bn and the Soviet Union about $902m. These figures date from 1976, but the overall debt picture is thought to have remained virtually unchanged since that time. It would appear, therefore, that what North Korea needs most badly is a massive dose of economic assistance from advanced industrial countries.

As far as is known the North Koreans are not in fact asking for help though it is supposed that economic matters must have been discussed last year when two top Chinese leaders, Chairman Hua Guofeng (Hua Kuo-feng) and Vice-Premier Deng Xiaoping (Teng Hsiao-ping), visited Pyongyang within months of each other. The North Koreans have confined their contacts with western industrial countries to negotiations on the rescheduling of existing foreign debt. They have shown no signs of taking a leaf out of the Chinese book and going all out for western economic assistance at the price of modifying domestic policies.

There are slight signs that the U.S. might be interested in lifting its embargo on trade with North Korea if it thought that political benefits were to be gained by doing this (for example if the lifting of the embargo were preceded by the start of "substantive" peace talks between North and South Korea). So far however the Americans appear to have been given no indication that Pyongyang is ready to ask for the embargo to be lifted. To do so would probably be difficult for President Kim Il-sung whose personal power rests on his reputation as a former guerilla fighter against the Japanese dedicated to solving Korea's problems by force.

In theory the Chinese or Russians could be of help in finding a peaceful solution to the Korean problem, but in practice they probably cannot. China shares a 750-mile (1,200 km) frontier with North Korea and probably has the capacity to station up to 50 divisions of troops on that frontier. That would be more than the entire North Korean armed forces. The Russians only have a 6 mile (10 km) shared frontier, but are the main source of North Korea's fighter aircraft and of more than half of its oil. Most of the rest comes from China.

The trouble with China or the Soviet Union trying to use these or other forms of leverage to put pressure on Pyongyang is that pressure from either country would automatically increase the influence of the other—something neither side is prepared to contemplate.

China is presumed to be especially anxious to maintain its current relatively friendly relations with Pyongyang after losing to the Soviet Union other regional power struggles (such as those in Indochina and Afghanistan). The Russians, on the other hand, can ill afford to give up the chance of securing naval repair facilities in North Korean warm water ports.

So one is left with the likelihood of a very slow thaw.

The odds would seem to be that proper peace talks between North and South will not get under way this year, that if they do they will move with extreme slowness. On the other hand some other developments on the diplomatic front are possible, including a bid by Japan to establish a [illegible] closer relationship with North Korea. At present Tokyo recognises the South Korean government only, but does still cherish the ambition of [illegible]ing the U.S. into a [illegible] relationship with Pyongyang as it did seven years ago in the case of relations with China.

If the thaw is as gradual as seems likely, the U.S. withdrawal programme may have to be rephased over a much longer period than at present proposed. In the end, however, both U.S. military presence and a continuing cold war in the peninsula may come to be seen as an untenable anachronism.

HOW THE FORCES ON THE TWO SIDES COMPARE

	GROUND FORCES	NAVAL	AIR FORCE
NORTH KOREA	430,000 troops in 25 divisions 1,950 tanks 2,500 artillery pieces 2.5m men in para-military reserve	390 ships totalling 44,000 tons including: 12 submarines 6-7 frigates 17-19 missile attack vessels	630 aircraft, including 700 supersonic MIG 21s
SOUTH KOREA	560,000 troops in 20 divisions 850 tanks 2,000 artillery pieces 2m reservists	120 ships totalling 78,000 tons including: 18 destroyers No submarines	340 aircraft, including four squadrons of F4s 13 squadrons of F5s
U.S. IN KOREA	32,000 troops in one division	Support units only (but 7th Fleet units based in Japan)	60 F4s in four squadrons

MEN AND MATTERS

Gambling £3.75m on Scottish pride

The Government had had to find a use for an empty Scottish parliament building once before; but the Edinburgh property market was different in 1707, and the lawyers snapped it up to house the High Court and the Faculty of Advocates, Scottish equivalent of the Inns of Court.

If the country rejects devolution in the referendum tomorrow, finding a new use for the old Royal High School—being renovated at a cost of £3.75m as a home for the Scottish Assembly—might not be so easy.

Indeed the Scottish Office refuses even to contemplate such a possibility. On its instructions, the Property Services Agency has been pushing ahead and hopes to finish conversion work by the end of April. All the seating is installed in the elegant oval debating chamber, microphones are wired up, and 158 television screens, part of the internal information system, being put in position.

The builders have gone to a lot of trouble to ensure that the Georgian grandeur of the building remains: ceiling mouldings and pine panelling on the walls have been replaced to the original specification, and an extra gallery built for spectators is supported by cast iron columns moulded to match the existing ones.

The overall effect is luxurious, and a little cramped. It is hard to imagine what else it could be used for if the vote goes the wrong way. With only 150 seats in the main hall, it is too small for a conference centre, and the local councils already have lavish accommodation of their own.

A Quango might find a use for it. Or perhaps a job creation scheme could move it, stone by stone, to London to house the all-party talks which Mrs. Thatcher threatens to set up to go through the whole devolution business again. I doubt if more than 150 MPs would ever feel irresistibly drawn to such discussions.

Clash of Yesmen

In the last few days, Leader of the House Michael Foot has been supplying his well-tried rhetoric to any newspaper that asks for it, in the form of personalised messages to Scottish and Welsh readers. He is urging them, of course, to vote for devolution. Even the Communist Morning Star was favoured with several rousing paragraphs.

Not all has gone well, I have to report. One of his staff told me with some heat yesterday that a Foot message for the Sunday Mail in Glasgow had been inserted in garbled form—and published under the name of John Smith, the Trade Secretary. "We are trying to sort it out now," she fumed.

Intrigued with this seemingly mischievous Glaswegian behaviour, I contacted the paper's brisk assistant editor, Ms (she insisted) Ruth Wishart. "No mistake," said Wishart. "We had more messages than we had space to print. . . . I was on the phone for a long time with Mr. Smith about what he would like to say.

As former Devolution Minister, Smith seemed more relevant. "Admittedly his message was not very different from Mr. Foot's." So assistant editor Wishart put the Leader of the House's words on the spike.

But Foot can take comfort that the Morning Star printed him perfectly down to the last full stop. With presumably unconscious irony, he informed the comrades that devolution should be "welcomed with open arms by everyone who calls himself a democrat"

Adrift

Long queues in some London branches of NatWest at the beginning of the week reflected the dependence on computers which the clearing banks share with hte Civil Service. A computer fault deprived a number of the branches of access to the records.

"A few months ago somebody put an axe through Post Office cable—that did the trick nicely as well," the branch in Cannon Street told me. What does the bank do without information? "If somebody wants to draw a sizeable sum, we have to ask, as discreetly as possible, one or two polite questions. . . . We have to fall back on straightforward common sense."

Ayatollah's ears

The Iranian community in semi-exile in London keeps in touch with home through long telephone calls to family and friends out in Tehran. The gossip has been relaxed, in the blithe assumption that the once ever-listening SAVAK, the Shah's secret police, no longer taps the lines.

So one affluent Iranian here ordered his servants to bury the family jewellery in the garden in Tehran until more settled times should arrive. A short while afterwards a gun-toting squad confronted the servants, to demand: "Have you buried it yet?"

This use of the tapping facilities has led to the coining of an ironic new acronym: SAVAKH. In Farsi, it stands for "Service for Information and the Security of Khomeini"—pointedly close to the full meaning of SAVAK.

Silent types

Our embassy in Saudi Arabia was painfully starved of news yesterday about the mounting war in neighbouring North Yemen. This was not through any lapse on the part of British diplomats in Sanaa, capital of North Yemen—they were sending out all the latest battle reports.

But the only secure way to send a message from Sanaa to Jeddah (about 400 miles as the desert crow flies) is through London.

The Foreign and Commonwealth office admits that this kind of difficulty is pretty general: "Only some priority traffic is getting through." In some parts of Whitehall, I gather, the lack of messages is causing acute withdrawal symptons.

Stony road

Titters from the platform yesterday when a shareholder at the annual meeting of First National Finance Corporation, one of the heaviest fringe banks in the Bank of England lifeboat, moved that the increase in the auditors' fees be limited to 5 per cent as a sign of support for the government's pay pouicy. Despite pleading, apparently quite sincerely, the shareholder—described by my informant as 60-ish and "not a City man"—failed even to find a seconder. It is, after all, only public money that is at stake.

Observer

Vickers runs into trouble in Newcastle

By HAZEL DUFFY, Industrial Correspondent

'AKE THE ingredients of Tyne-ide, heavy engineering and re-undancies and one has a recipe or one of the most emotive ituation in British industry.

When Vickers announced on anuary 5 that it intended to lose down its Scotswood heavy ngineering plant in Newcastle, ith the loss of 750 jobs, the nitial reaction from the ssembled workforce was a tunned silence. Instead of the arrage of questions and con-emnation which had been xpected by Mr. Noel Davies, oint managing director of ickers Engineering, only two uestions were asked. One was: s the decision irreversible?" to hich Mr. Davies replied "Yes."

Since then, however, the work-rce has been far from silent. e Save Scotswood Campaign mmittee was quickly formed, hich is supported by workers Vickers' other Tyneside fac-aries. It has been voted 0,000 by the Tyne and Wear unty Council and Newcastle ty Council. At the same time, rd Robens, chairman of ckers, has found himself hav-g to justify Vickers' action in terviews on both radio and evision.

The company's reasons for nting to close down Scots-ood, as communicated to the ployees, are that the plant s lost money in 21 out of e last 25 years, and that its der book has been declining the point where there will only enough work for less an half the workforce by the d of March. Furthermore, ojections for the plant show at it would continue to lose ney. Since losing its profit-le aerospace interests through tionalisation, Vickers can no ger continue to support such smakers.

The workforce retaliates by ying that Vickers has prived Scotswood of invest-nt over the years, and that has actually turned away ders in recent months because was intending to close the plant. On a more emotional note, the committee maintains that Vickers has a moral and social obligation to keep Scotswood going, because it was Tyneside that was the mainstay of its profits in the past.

In between the current polarisation of management and workforce is the Department of Industry, which is analysing the claims and counter-claims to see if there is any possibility of saving the plant. Government interest in a closure of this size on Tyneside was pretty well assured. But the campaign committee made sure of its claim on government time by involving the Northern Group of Labour MPs at an early stage, and by securing a meeting with the Prime Minister when he was in Newcastle in January for a conference.

Tangled webb

Mr. Leslie Huckfield, the junior industry minister, is now working towards tripartite talks being held when officials have been able to draw up an analysis of the situation at Scotswood, although the delicate question of who should represent the workforce—the trade unions, the committee, or Vickers' shop stewards combine committee — has yet to be decided.

The fact that the way for such talks is only now being prepared is indicative of the whole tangled web that the Scotswood case has become. The Department of Industry was first informed of the Scotswood problem in May, 1977, in a letter from Vickers to Sir Peter Carey, permanent secretary at the department.

The possibility of a further contraction of heavy engineering in the Newcastle area obviously aroused concern among its officials, and Vickers Engineering came up with a major scheme for reburbishing and re-equipping Scotswood.

Scotswood was founded at the end of the last century by William Armstrong, the armaments manufacturer. During the two world wars, it flourished in this role, but at the end of the last one, Vickers had to set about finding a product for the plant. It enjoyed a brief resurgence of activity during the Korean war, but after that, it was assigned to making tractors. Problems with the product, and competition from the established tractor producers, turned the programme into a failure. In the 1960s, Scotswood switched to making presses for the motor industry, but this again proved a failure. The decision was taken to become a jobbing heavy engineering firm doing work mostly for outside customers.

In this, it has had some success, only moving into losses, amounting to around £1.25m in the past couple of years, when there has been a severe recession in the industry. Industrial relations with the workforce—some 50 per cent of which is skilled, and most of the remainder semi-skilled — have been good. A variety of products have been made at Scotswood, some under licence like the Paceco container crane and the Logeman baler. Customers include the British Steel Corporation, Davy-Loewy, Standard Telephones and Cables, and work is currently being completed on a huge dynamometer (for the testing of tyres) for China—only the third such project to be undertaken anywhere in the world. The order was secured by Vickers' Design and Projects Division, and the value of the work placed with Scotswood was £600,000.

The actual buildings at Scotswood, alongside the Tyne, are bady in need of repair. Vickers' management readily admits this, but they reject the workforce's allegation that the machines are any older than in the rest of British heavy engineering.

Terry Kirk

LORD ROBENS, the chairman of Vickers. He has said of Vickers Engineering: "It will in due course . . . virtually disappear."

There is a clear need for refurbishment, however, and this scheme drawn up in 1977-78 was designed to meet it.

The scheme was costed at £14m, of which probably about a third would have been met by the Government under regional development grants and selective assistance. It was suggested that the National Enterprise Board should also be brought into the discussions with a view to a joint venture. Before Vickers ever got to the stage of asking for Government assistance, however, the scheme had been rejected by the company as being over-ambitious in the light of the continuing recession. The NEB's northern office is understood also to have decided that the erturn from the investment would not have met the NEB's requirements as laid down by Parliament, and the issue never went to the main Board.

By this stage, Mr. Davies, who had joined Vickers Engineering from Barrow "to escape nationalisation," he says, had asumed responsibility for Scotswood following the transfer of Mr. Alan Taylor, previously joint managing director of Scotswood, to look after energy conservation—a head office job at Vickers. Two other alternative plans for Scotswood had been drawn up—one, a scaled-down version of the original scheme, costing around £8m, and the other, the transfer of Scotswood production to adjacent Elswick, which makes mostly military equipment, at a cost of £5m.

Neither plan was ever discussed with the Department of Industry, and both have since been rejected by the company. The transfer to Elswick had been put to a vote at Scotswood and turned down by the workers. But they are now angry that the transfer was not presented to them as an alternative to closure. Mr. Peter Tolchard, Scotswood convenor and leader of the campaign committee, says: "I think if it had been presented in that way, it would have been considered."

The committee members maintain that management has refused to consult them over the future of Scotswood (since the closure announcement, Mr. Jim Hendin, chairman of Vickers Engineering, and Mr. Noel Davies, have met them). They further allege that Vickers is determined to get out of heavy engineering—most of which is concentrated at Scotswood—and that it wants the 16-acres site for warehousing, similar to a scheme carried out when Michell Bearings, another Vickers plant on the Tyne, was refurbished last year, leaving some excess space.

Mr. Davies denies the second charge, but both he and Lord Robens would seem to confirm the first in statements that they have made concerning the poor future for heavy engineering in Britain. Lord Robens said in a Granada TV interview this week. "It will in due course, like many of the older industries, virtually disappear." Although there is serious overcapacity in the industry worldwide, this does seem to many observers a rather sweeping analysis, and one which is certainly not shared by those companies taking part in the Government's industrial strategy.

More scope

Vickers has been moving away from its traditional activities during the past decade, and this was made all the more urgent when the election of the present Labour Government heralded nationalisation of its shipbuilding and aerospace companies. In engineering, it has gone into higher technology products where the returns, and the future, offer more scope than the types of products made at Scotswood, although not always, as the losses suffered in the offshore engineering venture have demonstrated.

Vickers has clearly decided that it cannot afford to hang on at Scotswood to see if the market for heavy engineering products picks up. Apart from the days when it was making armaments, the works has made little contribution to the group's profits, and certainly not the 15 to 20 per cent return on capital which Lord Robens now holds out as a target for the group. At the same time, it must have money spent on it in order to keep going. In spite of this, Mr. Davies says that closure is "a disaster in commercial terms. If there had been any possible way of saving it as a business we would have done it."

The group has not released its estimates of the cost of redundancy. But a report by Newcastle City Council, commissioned by the campaign committee, puts the social cost to the taxpayer at between £1.8m and £2.4m in the first year following closure. The £2.4m figure assumes that no Vickers employees find alternative jobs. Although this is unlikely, prospects in the Newcastle area, which has an unemployment rate of nearly 8 per cent, are clearly not good even for skilled workers.

During all these events, Vickers says that it has been searching for new heavy engineering products to be made at Scotswood. The company denies that it has turned away orders, although it agrees that it was slow to prepare a tender for mining roof supports for the Dowty group, in the belief that it was very unlikely to get the contract. Only £5m worth of orders out of £50m tendered for in the past year have been secured. For the plant to work efficiently, the management says it should be taking at least double this amount.

Although the company has agreed, at the request of the Government, to hold discussions during the 90-days consultation period (which started on January 5), the chances that it will have a change of heart are slim. Informal soundings by Vickers with possible buyers have produced no interest. The only alternative to closure at this point would seem to lie in the hands of the Department of Industry, which could probably sweeten any potential purchaser with the prospect of government grants.

Letters to the Editor

Floating charges

From Mr. M. Allen

Sir,—May a simple bank clerk a few simple points on Mr. rtley's letter (February 23) which he deplores the egedly favoured position in a uidation of a bank holding a ating charge as against un-ured trade creditors? There e, of course, the well known ints that a business with trade editors will also itself be pporting trade debtors, and ten these two items will pproximately match; that a ank is dealing with its epositors' money and owes hem a duty to exercise rudence; and that frequently xed charges over specific assets njoy priority over a floating harge, and in the event of a iquidation leave precious little or anyone.

More fundamentally, however, we must consider the question of who finances whom and with what. Of course, a business may depend partly on its trade creditors, but who do these trade creditors in their turn, ook to for finance? Partly, of ourse to the banks, who look o their own creditors (their depositors), and so the rgument begins to move in a ircle—quite possibly an ever-diminishing one with the in-evitable and unpleasant final onsequence! Mr. Hartley can-ot claim, in his third paragraph hat, vis a vis banks and trade reditors one is not more valu-able than the other (possibly rue) yet conclude his thesis with a final paragraph referring to trade creditors as "... a part f the commercial world upon which, after all, they depend to much greater extent than upon banks." Even a chartered ccountant cannot have it both ways.

Last, and of most practical alue, every banker knows who, a liquidation, or simply when usiness is sticky, is the last, he very, very last, person to be aid if he doesn't have any ecurity—and for readers who can't guess, the clue is that it is also the person who was the irst to be approached for credit initially, probably before the business was even off the round at a time when it had no trade at all, much less any trade creditors.

Martyn Allen.
40, Elmbridge,
Old Harlow, Essex.

Foreclosing on a debenture

From Mr. J. Taylor

Sir,—I was very interested to read Mr. Hartley's letter (February 23). I am, however, surprised that, as a self-confessed chartered accountant, he should have got the matter of a debenture to a bank on its usual form so wrong.

On a point of detail, the banks' normal debenture consists of a fixed and floating charge, but I accept that the part in which Mr. Hartley is interested; particularly in view of a recent decision in respect of "Romalpa" is the floating charge and this is the reason for his concern.

With the greatest respect to his professional status, I beg to submit that his argument falls down on at least two points. He falls into the common error of lumping the outside trade creditors together and forgetting that the bank is a creditor also and invariably the greatest single creditor. I would submit that this entitles a bank to some priority, particularly as the money it puts out is the main supporter of the stock and debtors coming within its floating charge.

I am sure, he will agree that, generally speaking, debentures to the banks are given by small to medium sized companies. Bearing this in mind, I think Mr. Hartley will find that in many, many cases the bank is the largest stakeholder in the business. This too, I suggest, entitles it to some special treatment.

J. Taylor,
Plonks Hill,
Shamley Green.
Nr. Guildford, Surrey.

Working capital

From Mr. J. Kirkham

Sir,—Mr. Hartley's letter (February 23) on the "Romalpa" issue skates over a number of points which are important if the floating charge is to be assessed fairly. For the sake of brevity I shall dwell here on just one aspect of his letter; the sources of working capital of a business.

I would agree that for a good many companies the amount outstanding to trade suppliers at any one time is likely to be of a magnitude at least as great as short-term bank finance. But what Mr. Hartley fails to point out, and what he will be equally aware of, is that credit from trade suppliers will be obtained from many sources, which in aggregate might represent a substantial figure but individually do not. Indeed, if such were not the case and reliance were put on trade credit in large amounts from one or just a few suppliers, then I doubt that bank finance would be forthcoming for such an inherently unstable company.

A straight comparison therefore of amounts owed under different headings in company balance sheets is misleading, identical amounts of trade credit and bank finance disguising the fact that the bank will be far and away the largest creditor. And the creditor, furthermore, whose money will be in the company the longest, irrespective of "repayable on demand" clauses in bank facility letters, compared to trade creditors who will expect to see their money in four weeks or so.

As the most substantial short-term creditor why should the bank not seek to secure the money it lends? Or, with his talk of natural rights and natural justice, does Mr. Hartley feel that banks have a "natural right" to lose more than others when a company fails?

J. W. Kirkham.
14, Pemble Close,
Five Oak Green,
Tonbridge, Kent.

Equality of the sexes

From the Pensions Manager, Pfizer

Sir,—The news that the Government's early retirement "job release" scheme is to run for another year points to the inexcusable inequity that exists in the availability of retirement savings certificates — the so-called Granny Bonds. They can be purchased by women over 60, whether working or not, but not by men below 65, even if they are retired.

Many men retire early these days, either voluntarily or as a result of the numerous redundancy situations that arise, and this is added to by the Government's heavily advertised "job release" scheme. One can accept that the country cannot yet afford to lower the male retirement age to 60, but it surely would not be impossibly expensive to give men equality with women in being able to purchase these certificates at 60. The maximum limit per person is, after all, a fairly parsimonious £700.

The situation is highlighted for me by the position of two neighbours. In one house both husband and wife are working. The wife, aged 62 and earning £4,000 per annum, has her maximum entitlement of retirement certificates. Next door the husband, who was made redundant six months ago at age 61, supports himself and his wife on unemployment pay. But he is not allowed to buy any.

In the name of all that is sweet and reasonable in this country, why not?

J. L. Hardiman,
Sandwich, Kent.

Happenings in Newham

From Mr. J. O'Sullivan.

Sir,—With reference to your "Whitehall docklands policy attacked" report, February 22, I suppose it is inevitable that the monolithic Government agencies will wear several hats on such a contentious matter.

These "hats" will ensure that most political influences will be satisfied — but few good commercial decisions will be made. While the debate goes on at high level, private enterprise will be getting on with the job on the ground. There is currently a massive investment in Nigel Spearing's constituency of Newham South where companies are already moving in on the London industrial park and where new jobs are being created with working conditions which are setting high standards in the East End.

Government agencies are being allowed too much "voice" in (to quote Nigel Spearing) "under-estimating and underrating" the area. To correct Mr. Edwards and Mr. Alex Halfin there is land available for sale, and units available for letting. There is real evidence of actual investment with new industrial units being taken up—this is not surprising when it is realised that the London industrial park, and the East End in general, offer one of the few remaining opportunities for large scale industrial expansion close to the centre of London and where main traffic routes (including the river) converge.

It is time Government agencies realised that it is all happening in Newham — and while they debate docklands they should be supporting and ensuring the growth taking place in adjoining areas.

J. O'Sullivan,
9 Connaught Road, Harpenden,
Hertfordshire.

Achievements of Clydebank

From Miss I. Cassidy

Sir,—I was interested to read (February 21) that Clydebank is mounting an exhibition in London, and which I look forward to seeing, as that is an area which was well known and liked by me in its industrial heyday.

Allowing for the many changes which time has effected in the prosperity of the region, however, I am saddened and disturbed by your correspondent's depressing report of the seeming deterioration in the morale and production records of the workforce. In one particular case he mentions that "productivity is only 47 per cent of the most efficient West German tyre factory, and the amount of scrap produced is significantly higher." This somewhat sweeping assertion prompts me to enquire if we are really comparing like with like? When measuring productivity of workers so many factors are involved (e.g. are plant and tools equally up to date in the respective factories, quality of raw materials being utilised, conditions of workplace, accessibility of factory, etc?) that I feel very careful investigation should be made before airing disparaging opinions. It can be extremely disheartening for a workforce which is engaged in fighting an industrial recession (which is undoubtedly the case in Clydebank) to be involved in comparisons with certain areas or countries where current capital investment and other factors may be more favourable to higher production.

Therefore I trust the exhibition will show many of the wonderful industrial achievements—past and present—of Clydebank and its workpeople, and hope it will prove to be a real encouragement to the district council in its valiant efforts to revive the prosperity of the region.

Miss Isobel Cassidy.
30, Chadston House,
Halton Road, N1.

Running the buses

From Mr. P. White

Sir,—Mr. J. A. Redwood's reply (February 15) to my letter of February 13 continues to reflect several misunderstandings.

I did not say that your figures regarding different types of passengers (in Ian Hargreaves's article on February 1) were wrong, but that Mr. Redwood had interpreted them incorrectly, by assuming that the pensioners, young, and wives of manual workers together came to no more than 20 per cent, whereas pensioners alone often account for this proportion. As an example, one may consider figures from the market analysis project (MAP) surveys of the National Bus Company (which were, I suspect, also the basis of those quoted by Ian Hargreaves). In the Hereford area, some 18 per cent of passengers were found to be over 60, 43 per cent from the age group 5-24, and 33 per cent women between the ages of 25 and 59. Only 6 per cent of passengers were men aged between 25 and 59. Broadly similar figures may be found in other areas subject to MAP surveys, such as Oxfordshire. I did not myself advocate open-ended subsidies, but stated that if one gave concessionary fares to these groups (as Mr. Redwood suggested in his original letter), then the great majority of passengers would be receiving concessionary fares, in which case one might as well give general support to keep fares down.

We agree that peaks in demand cause many of the problems. It is often, however, school (not work) trips which cause the sharpest peaks outside large urban areas, and thus the issue of school transport policy (role of contract buses giving "free" services, concessionary fares structure, etc.) remains critical. A sharp increase in peak fares on stage services for school-children would cause considerable hardship, could lead to demand for more "free" contract services (at high public cost), and greater use of cars by parents to take their children to school (adding to peak congestion, plus dangerous turning and reversing movements at school entrances). Regarding the work trips, most passengers should be able to pay a realistic fare, but some bias now existing in favour of car use needs to be removed (losses on publicly-operated parking facilities; the inability for an employer to offer easily a tax-free public transport allowance to compare with non-wage benefits such as free parking at the workplace, and provision of company cars, etc.).

Mr. Redwood talks about preserving routes "even when the people who once used them may now own cars" (my emphasis). There is certainly no question of preserving routes unchanged for the sake of so doing, but a need to preserve access to facilities (shops, chemists, etc.)—it is only some, not all, passengers who have obtained use of cars. As I pointed out, support to conventional bus services (operated in an efficient manner) is often the most cost effective means of providing such mobility. The alternative is to severely reduce the mobility of many people at a time when many facilities such as shops are becoming more centralised in larger towns.

I did not suggest that central government should simply "make up for the lack of revenue received from county councils" which could involve an open-ended operating subsidy, unrelated to local needs or operational efficiency, but that the Government could lift what is in any case an unreasonable burden of about £12m per annum. In so doing it could meet its own objectives in a far simpler way than by prolonging disputes with counties such as Oxfordshire. Mr. Redwood suggests that bus companies operate commercially, but what commercial business would run with all its capital treated as a repayable fixed-interest debt, added to which are capitalised operating losses imposed as a result of previous central government policies? Transport policy of counties also involves more than the role of bus companies in isolation (although their own "commercial" approach, as reflected in MAP, certainly makes a good base for county/operator relationships), given the statutory responsibilities for school transport, health facilities, etc. It is vital to plan for these as a whole if value for money from public expenditure on transport is to be obtained.

Peter R. White.
(Senior Lecturer in Public Transport Systems),
Polytechnic of Central London,
35, Marylebone Road, NW1.

Today's Events

GENERAL

UK: Trades Union Congress general council meets, Congress House, London.

Meeting of Labour Party national executive committee, Transport House, London.

Civil servants' strike action starts at Stock Exchange.

Speakers at Labour Party referendum meetings — Mr. Michael Foot, Tredegar, and Lord Elwyn-Jones and Mr. Barry Jones, Rhyl.

Confederation of British Industry conference on OPEC after the Boom—Where are the Markets Now?, 21 Tothill Street, SW1.

Dr. A. W. Pearce, chairman, Esso Petroleum, addresses conference on World Energy Economics, Inn on the Park, W1.

Mr. Nigel Foulkes, chairman, Civil Aviation Authority, is chief guest and speaker at Aerodrome Owners Association annual dinner, Royal Lancaster Hotel, W2.

Overseas: President Giscard d'Estaing of France arrives in Mexico on official four-day visit.

Second day of talks between Dr. David Owen, UK Foreign Secretary, and Herr Hans-Dietrich Genscher, his West German counterpart, Bonn.

Hong Kong Budget.

Indian Budget.

COMPANY RESULTS

Final dividends: Barnagore Jute Factory. Interim dividends: Australian and International Trust. Challenge Corporation. George Ewer. Raine Engineering.

COMPANY MEETINGS

Associated Sprayers, Plume Street, Birmingham, 12. M and G Group, Three Quays, Tower Hill, EC, 2.30. J. F. Nash, Chamber of Commerce, Harborne Road, Birmingham, 12. Reliant Motor, Chamber of Commerce, Birmingham, 11.

UK COMPANY NEWS

IMI sales pass £500m but profit slips to £32m

ENCOURAGING progress in many parts of IMI was offset by poor results from zip fasteners and to a lesser extent from Eley ammunition and taxable profit slipped from £34.2m to £32.01m in *the year ended December 31. 1978.*

At midway, profits had fallen from £18m to £15.7m.

Sales of the Birmingham-based group exceeded £500m for the first time, rising by 12 per cent *from £467.025m to £524.01m.*

As usual, the group is reserving its comments on the outlook *for the current year,* but Mr. Eric Swainson, managing director, said the year had started badly because of the impact in January of the industrial disputes and the bad weather.

The 1978 profit includes a loss *of £0.7m (£0.3m) from the change* in value of the net current assets of overseas subsidiaries due to changes in exchange rates. Also *included* is the share of major associates profits of £1.9m (£3.1m).

Earnings per 25p share before extraordinary items are shown at 13.9p against 9.2p and 11.8p (9.1p) after such items. The final dividend is 2.00355p making a maximum permitted total of 3.67855p against 3.32141p.

	Year 1978 £000	*1977 £000
External sales	524,006	467,016
Depreciation	10,025	9,481
Profit before tax	32,010	34,201
Tax	4,245	13,808
Net profit	27,765	20,392
Minorities	960	661
Metal stocks profit	201	†618
Rationalis. costs	6,500	—
Other credits	2,258	‡139
Applicable IMI	24,684	18,978
Dividends	7,723	6,916
Retained	16,961	12,060

*Restated following SSAP15.
†Loss.
‡Debit.

Extraordinary items in the year include £6.5m for rationalisation of production facilities to effect structural changes in difficult trading areas. Of this, £700,000 had been spent by the end of the year.

The directors estimate that inflation adjustments on a CCA basis would reduce pre-tax profits to some £20m.

Sir Michael Clapham, chairman, says the group was unable to maintain margins, particularly in export markets. Strong demand had continued for copper tube throughout the year largely as a result of the surge *in the* home improvement market.

The sporting ammunition had a poor year with demand lower than expected and increased and intense competition largely from France and Germany.

Sir Michael says that in the zip fastener operation prices were inadequate as markets were reduced by *further* import pene*tration of finished clothing.*

Numbers employed in Europe were cut by about 1,200 at considerable cost. "Nevertheless further retrenchment and rationalisation will be necessary to restore acceptable performance in the permanently contracted market open to us."

IMI spent about £19m on fixed assets last year, an increase of £4m. Of this £16.5m was in the UK compared with £12.5m in the previous year. Current year capital spending is expected to be a little more than £20m.

Cash generated amounted to £40m, but there was a shortfall in requirements of £10m which was covered by short-term borrowings.

The group also announces the formation of a new company, IMI Drinks Dispense, to co-ordinate and expand the company's interests and involvement in the manufacture of the equipment required for dispensing drinks.

Chairman of the new company is Mr. R. Amos, an executive director of IMI. Mr. R. S. Spencer has been appointed deputy chairman.

See Lex

HIGHLIGHTS

Dramatic price increases were seen in the gilt edged market yesterday and Lex considers the Government's *dilemma in* responding to a run-away market. Elsewhere three big and varied companies have reported their results. National West*minster Bank enjoyed a bumper second half* as interest rates shot up and there is a further release of bad debt provisions. Commercial Union's profits are up and a modest rise is on the cards for next year. Meanwhile, on the industrial scene IMI reports generally good business but margins have been under pressure and a sharp setback in the zip market leaves full year profits lower. Grindlays disappointed the market yesterday, profits were below expectations and the dividend *is just 10 per* cent higher. Meanwhile Lasmo continues to make losses but light is appearing at the end of the tunnel.

Empire Plantations net loss

THE DELAY in publishing the *1977/78 results has been caused* by the process of Indianisation, say the directors of Empire Plantations and Investments announcing an attributable loss of £28,000 compared with a £214,000 profit.

The final dividend of 1.32p per share in respect of 1976/77 is to be paid on April 2, 1979, 17 months after payment of the *interim for the same year. Divi*dends of 1.98p (1.98p) have been declared for 1977/78 though no date for payment has been set.

Mr. Michael Slocock, a director of Empire, said yesterday that the payment date of the final for 1976/77 "reflected the date on which the remittance for the reevant year was received in *London." Most other tea com*panies operating in India had not yet received remittances in respect of that period at all, he added.

Turnover for the March 31, 1978 year rose to £3.03m (£2.71m) and pre-tax profits were slightly improved from £1.02m to £1.08m. Stated earnings per 10p share, however, fell from 3.98p to 2.08p.

*The directors consider the pre*tax result to be most satisfactory in view of trading conditions in the tea industry in the latter part of the year. Trading profits from the group's Indian tea estates rose 19 per cent to £867,612.

Trading in the current year has been satisfactory although *the level of profitability con*tinues to suffer from low tea prices. The outcome for the year will depend on trends in auction prices in the coming months.

	1977-78 £000	1976-77 £000
Turnover	3,028	2,707
Trading profit	867	729
Exchange loss	48	*18
Share of assocs. profit	265	267
Profit before tax	1,084	1,015
Overseas tax	806	678
UK tax	82	93
Extraord. debits	†159	29
Minority interests	65	—
Attributable loss	28	*214
Brought forward	315	225
Preference dividends	8	8
Ordinary dividends	117	117

* Profit. † Primarily comprises the loss as a result of Indianisation scheme.

CU tops £142m. after underwriting recovery

A RECOVERY from losses of £20.9m to a £2.9m profit in the underwriting result was the *major factor in Commercial* Union Assurance Company lifting pre-tax profits from £99.8m to £142.2m in 1978.

At the halfway stage, the group was ahead from £38.2m to £64.2m and had climbed to £101.1m at *nine months compared* with £66.7m.

The underwriting result followed a profitable third and fourth quarter and was reached after a release of £2.4m from the extreme weather provision.

World wide premium income in sterling terms showed an increase of 3 per cent to £1.1bn. But allowing for the effect of changes in rates of exchange, the growth in premium income was 5.5 per cent.

Earnings per 25p share are shown at 21.37p against 19.4p. The final dividend is 5.673p making a total of 8.536p *compared with 7.722p.*

In the UK, the improvement in underwriting continued, partly due to the effect of the lower rate of inflation on claims costs. The underwriting profit in the U.S. increased with improved claims experience in most classes of business.

However, except for workers' compensation business, premium rate increases were more difficult to achieve due to growing competition. The statutory operating ratio for 1978 was *98.5 per cent compared with* 98.2 per cent in 1977.

In Australia *intense competi*tion and difficult trading conditions caused the under*writing result to deteriorate.* In Canada there was again a small underwriting profit and directors estimate that there will be no material amount of "excess revenue" to be refunded to policyholders under the Anti-*Inflation Board regulations.*

The underwriting loss in the Netherlands was appreciably lower than in 1977 with the motor account, in particular benefiting from premium rate increases and the effect of lower inflation.

The marked improvement in the result for the rest of the world arose from better experience in a number of territories and an excellent marine and aviation profit for the 1976 *underwriting year closed at the* end of 1978.

	1978 £m	1977 £m
Premium income	1,100.7	1,072.5
Investment income	143.3	127.7
Life profits	15.0	14.2
Underwriting	2.9	*20.9
Loan interest	19.0	21.2
Profit before tax	142.2	99.8
Tax, minorities	54.4	32.2
Attributable	87.8	67.6
Underwriting result—		
UK profit	3.8	*1.7
U.S. profit	7.7	3.3
Australia loss	1.7	†0.4
Canada profit	0.1	0.1
Netherlands loss	11.4	15.8
Remainder profit	4.4	*7.4

* Loss. † Profit.

Investment income showed an increase of 12 per cent. After allowing for the effect of changes in rates of exchange, the acquisition of Estates House Investment Trust and the rights issue in 1977, the underlying increase was 10 per cent.

A spokesman for the group said yesterday that CU had suffered substantial losses so far this year as a result of bad weather in the UK. They could be greater than those experienced in the early months of 1978.

He added that the group had made a small profit on its UK motor account last year. Further rate increases were inevitable, although the CU was trying to stick to a 12-month gap between rises rather than taking two bites at the cherry.

The group was expecting that its U.S. underwriting results would deteriorate in 1979, although it was reasonable to hope that the decline would not be too steep. Motor rate increases were very difficult to *come by, and the CU's operating* ratio on this account last year had deteriorated from 96.5 to 99.7 per cent.

However the workers compensation business was still recovering, he said. The operating ratio had improved from 109.7 to 103.8 per cent.

Commercial Union was still on a recovery tack in Holland, the spokesman continued. Taking in life profits and investment income, profits in this territory had all but doubled to £16.2m in the latest period.

See Lex

Grindlays improves to £37m after lower debt provision

AN INCREASE from £30.44m to *£37.23m* in profit, before tax, is reported by the Grindlays Holdings group for the year 1978, following a first half rise from £15.62m to £18.98m. The result was struck *after* a debt provision halved to £5.8m.

Profits of the 61 per cent owned subsidiary Grindlays Bank showed a rise from £30.64m to £37.19m. Mr. N. J. Robson, chairman, explains that currency *fluctuations have again affected* the results and there has been a net disadvantage of around £1.9m mainly incurred during the second half (£1.6m). The profit is subject to tax of £15.4m which again almost entirely relates to tax in countries overseas.

Referring to changes in accounting policies recently announced by the clearing banks, the chair*man points out that some of their* proposals were implemented by the group several years ago.

The directors have decided to continue this year with the existing accounting policy with regard to provisions for doubtful debts and to continue to study possible alternatives.

The amount of debt provision (less recoveries) charged to profit and loss based on the actual experience of the year in 1978 was £5.8m (£11.8m). Mr. Robson explains that this reduced charge includes some recoveries mainly from property loans made some years ago, but to a considerable extent reflects improved lending systems and credit administration.

After all charges, the profit attributable to Grindlays Hold*ings comes out at £11.28m com*pared with £8.34m and earnings per 25p share are stated to be up from 24.5p to 31.7p.

The dividend is increased from 2.78p, to 3.07p with a final of 2.07p. Grindlays Bank has declared dividends for the year of £3.1m.

The profit attributable to Grindlays Bank holders amounts *to £22.07m compared* with £16.25m and earnings per share are stated at 134p (103p).

After adding profit retained of *£20m (£14.4m)* to reserves, which increased from £48.3m to £68.3m, group capital resources amounted to £128.2m (£108.6m). Group deposits at December 31, 1978, stood at £2.83bn (£2.65bn) while advances totalled £1.85bn (£1.69bn).

● comment

The Grindlays Holdings' share *price shot up from 117p to 133p* in the two trading days prior to the preliminary results on the hope that either the profits would be better than expected or that the dividend might be jacked up by a large amount. In the event profits' growth is disappointing, with a £6.6m increase at the pre-tax level for Grindlays Bank being largely accounted for by a £6m reduction in the charge for bad debts, and the dividend is only increased by 10 per cent. Consequently, the shares fell back to 126p yesterday where a yield of 3.6 per cent is covered over ten times. The fierce competition in international banking is biting into margins and Grindlay's total advances rose by only 3 per cent. The Far East seems to be doing well, the Middle East is flat and Grindlays' top priority seems to be to build up shareholders Funds which now stand at around £85m via heavy retentions.

ISSUE NEWS

Lee Valley pref. offer at £97

Lee Valley Water Company is offering for sale by tender £2.5m of 8 per cent Redeemable Preference Stock, 1986 at a minimum tender price of £97 per cent.

The price is one point lower than the three previous water company issues from Mid Southern (£5m), Mid Kent (£3m) and Coyne Valley £3.5m).

Lee Valley's stock will be redeemed at par on March 31, 1986. It is payable as to £10 per cent on application by 11 am on March 6 with the balance due before March 30. Tenders must be for a minimum of £100 stock and above that in multiples of £100.

The first dividend, amounting to £4.0745, will be payable on October 1, 1979. Thereafter payments will be made half yearly on April 1 and October 1.

Brokers to the issue are Seymour Pierce and Co.

● comment

The volatile conditions in the gilt edged market makes it almost impossible to judge the merits of the latest water issue from Lee Valley. In addition, comparisons are difficult as Lee Valley has pitched its terms over seven years, compared with five-year periods by other water companies recently. For those able to take advantage of franked income, the effective return of more than 17 per cent *looks very attractive. For ordi*nary taxpayers, it does not look so exciting, although the flat yield of 12.31 per cent, and 12.6 per cent to redemption, is slightly better than the return on seven year gilts. As usual, much will depend on what government stocks do over the next week, but based on yesterday's prices prospective buyers *will probably have to pitch their* tenders up to two points above the minimum price of £97 per cent.

Yearlings still falling

Interest rates on local authority loans continued to fall from the peak of 13⅝ per cent that existed just a fortnight ago. This week's issues carry a rate of 12 per cent and are issued at par.

The issues, which mature on March 5, 1980, are: London Borough of Enfield (£1m), Tunbridge Wells Borough Council (£250,000), London Borough of Hillingdon (£1m), London Borough of Hounslow (£500,000), London Borough of Wandsworth (£500,000), Metropolitan Borough of Rotherham (£500,000), Cheshire County Council *(£1.5m), Castle Morpeth District* Council (£500,000), Ettrick and Lauderdale District Council (£250,000), Middlesbrough Borough Council (£500,000), Cherwell District Council (£500,000), London Borough of Lambeth (£1m), Stirling District Council (£500,000), Arun District Council (£250,000), Chester-Le-Street District Council (£250,000), Lanark District Council (£500,000), Test Valley Borough Council (£250,000), Cleveland County Council (£500,000), City of Durham (£250,000), Mansfield District Council (£300,000), Lichfield District Council (£250,000), Macclesfield Borough Council (£400,000), North Wiltshire District Council (£250,000) and East Hampshire District Council (£500,000).

The Metropolitan Borough of Solihull is raising £250,000 by way of a variable rate bond maturing on February 22, 1984.

Vale Royal District Council has raised £1m by the issue of 13¼ per cent bonds dated February 22, 1984, at par.

Hirst & Mallinson rights

Hirst and Mallinson is raising £393,000 by way of rights to finance further growth both at home and abroad.

In particular the proceeds will be used to buy a freehold property in Bradford, leasehold properties in Blackpool and Kendal, and related plant, equipment and stocks to augment the existing catering equipment distribution business in the UK.

The purchase, for a total price of £340,000 (excluding VAT), has already been completed.

The rights issue is on the basis of three-for-10 at 33p per share, involving the allotment of 1.19m new ordinary shares.

The directors propose to pay dividends totalling 2.6p net on the increased capital for the year ending November 3, 1979, compared with 2p last time.

The rights issue has been underwritten by Charterhouse Japhet and brokers are Fielding, Newson-Smith.

Apart from catering equipment, the company's business includes pharmaceuticals, textiles and silverware.

For the year ended October 28, 1978, Hirst and Mallinson increased its pre-tax profits by 35 per cent to £445,100.

MONTFORT RESULT

Only half of Montfort (Knitting Mills) rights issue, raising £400,000, has been taken up by shareholders. The 50.1 per cent of the offer not accepted was sold in the market at a net price of 58p per share—equal to the rights price.

DIVIDENDS ANNOUNCED

	Current payment	Date of payment	Corre-sponding div.	Total for year	Total last year
T. F. & J. H. Braime	2.72	April 16	2.33	3.72	3.33
Commercial Union	5.67	May 17	5.15	8.54	7.72
First Scottish Am.	2.15	—	1.85	3.15	2.85
Grindlays	2.07	April 10	1.75	3.07	2.75
IMI	2	April 20	1.8	3.68	3.32
International Inv.	1.63	April 4	1.17	2.94	2.62
Investing In Success	2.44	April 25	2.11	3.35	[illegible]
Jos Holdings ...int.	0.88	April 4	0.8	—	2.25
Metalrax	0.9	—	*0.63	1.35	*1.10
Mt. Charlotte	0.55	July 2	0.49	0.55	0.49
Nat. Westminster	7.15	April 3	6.32	12.83	11.49
Western Mín. Cp. ‡int.	2	April 28	1.5	—	3
W'dhouse & Rixson	1.16	April 30	1.16	2.32	2.27

Dividends shown pence per share net except where otherwise stated.
* Equivalent after allowing for scrip issue. † On capital increased by rights and/or acquisition issues. ‡ Australian cents throughout.

Woodhouse & Rixson rises to £459,000

WITH SECOND half profits higher at £139,000 against £45,000, Woodhouse and Rixson *(Holdings)* finished 1978 ahead from £196,000 to £459,000 pre-tax, on turnover of £13.07m compared with £12.13m.

After a tax charge of £91,000 (£16,000 credit) and a £157,000 extraordinary credit compared with a £918,000 debit last time, there was a turnround from a deficit of £706,000 to a net surplus of £555,000.

The dividend total is maintained at 2.31806p net per 12½p share, with a final payment of 1.15903p (same).

The directors say that in view of the considerable disruption to normal activity caused by the road haulage strike it is extremely difficult to forecast trends in the demand for engineering products in 1979 and, thus, the group's likely profits.

However, they are confident that the group enters the year in a strengthened position to derive maximum benefit from whatever opportunities occur.

A revaluation of properties at *September 4, 1978, showed* a £711,000 surplus which has been added to reserves. The surplus on the previous revaluation realised in 1978 of £100,000 has been deducted from reserves.

Goodwill arising on the acquisition of Wicker Wire Products of £137,000 has also been deducted from reserves.

The group produces steel forgings, rolled steel rings, etc.

● comment

Adjusting for the Belgian losses, Woodhouse and Rixson's full-year profits show only a nine per cent rise at the trading level. Business has been tough in all divisions and has not changed substantially from the *previous year, when production* was barely equal to that achieved during the three-day week in 1974. The only bright spot to the results was that the forgings side, the main profit earner, probably did a little better than the industry average. Elsewhere, the oil strike hit demand for springs while the troubles in Iran took its toll on profits from special trailers. The market for flanges is still very flat but now that the Belgium operation is closed, prospects in this division look a little brighter. Overall, however, the road haulage strike will have wide-ranging consequences so it might be difficult for the group to make much headway in the current year. At 29½p the shares yield 12.2 per cent—nearly twice the sector average.

BOARD MEETINGS

The following companies have notified dates of Board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether dividends are interims or finals, and the sub-divisions shown below are based mainly on last year's timetable.

TODAY

Interims—Australian and International Trust, British Assets Trust, Challenge Corporation, George Ewer, Ratne Engineering.

Finals — British Enkalon, Change Wares, Drayton Commercial Investment, General Accident Fire and Life Assurance.

FUTURE DATES

Interims—

Jarvis (J.)	Mar. 2
Strong and Fisher	Mar. 8
Trans-Oceanic Trust	Mar. 1
Finals—	
Blagden and Noakes	Mar. [illegible]
Harris and Sheldon	Mar. 8
Investment Trust of Guernsey	Mar. [illegible]
Needlers	Mar. [illegible]
Queens Moat Houses	Apr. [illegible]
Union Corporation	Mar. [illegible]

Mt. Charlotte advances to record £855,000

RECORD profits, as expected, of £855,000, are reported by the directors of Mount Charlotte Investments for 1978 against a previous £582,000 at pre-tax level. Turnover advanced from £8.1m to £9.41m.

The year's profits were struck after interest of £252,000 (£284,000) but were before a tax credit of £4,000 (£30,000 charge). Earnings are shown as 2.62p (1.5p) per 10p share and the dividend is increased from 0.4949p to 0.553p net, the maximum permitted.

The tax figure for the year has been reduced by the utilisation of losses brought forward, by the excess of capital allowances over the corresponding depreciation and by stock appreciation relief.

The attributable balance was stepped up to £1m (£481,000) after an extraordinary credit for the period of £147,000 compared with a debit of £5,000 last time, and minorities.

● comment

A fully taxed historic p/e of 20.8 and a yield of 3.2 per cent in Mount Charlotte is an indication of the speculative froth that has built up among the smaller constituents of the hotels sector. Mount Charlotte, nevertheless, still has a good deal of growth potential since the arithmetic of upgrading many of its 1,600 hotel rooms looks particularly attractive. Local tourist boards offer grants of up to 30 per cent of construction costs for the addition of a bathroom while the last Budget introduced a 24 per cent initial capital allowance, followed by a 4 per cent recurring allowance on such improvements. The group is currently committed to upgrade 120 bedrooms in this way and there should be scope for improvements in a *further* 200 rooms in a programme which is expected to run until 1984. Given that the addition of a bathroom in a locality such as Glasgow can almost double the going tariff, Mount Charlotte is confident of its *medium term* profits prospects. Furthermore, much of that upturn should be reflected in earnings in view of the available tax incentives and the outstanding £250,000 of groundable losses. The shares dropped 1p yesterday to 26½p but, in the light of the high cost of new hotel construction, the margin for improving Mount Charlotte's *average 80 per cent occupancy* rate and the current tax advantages inherent in chasing higher tariffs it would be surprising if this setback developed into a rout.

Bad weather hits Nottingham Brick

At the annual meeting of *Nottingham Brick Mr. David* Crane, chairman, said the appalling weather had resulted in loss of production and deliveries for the company, and that had affected current profitability.

However, the order book remained satisfactory and the company was in a strong position financially, he said.

BIDS and DEALS

Caledonian recommends 150p offer from Comet

BY ARNOLD KRANSDORFF

After slowly building up its take to nearly 25 per cent, Comet Radiovision Services has finally put in a recommended takeover bid for Caledonian Holdings worth 150p a share.

This compares with a previous bid from London and Midland Industrials worth around 132p a share.

Last night Caledonian's share price closed 10p higher at 141p, which values the company at £14.1m. The Comet bid, which puts a £15m price tag on Caledonian, is £8.5m higher than Caledonian's flotation value of £6.5m just a month ago.

Two weeks ago Comet said it would seek Caledonian's recommendation to an offer worth 100p a share but that was before LMI, which holds nearly 30 per cent of Caledonian, put in an increased bid.

Yesterday's offer is for the 7.45m ordinary shares of Caledonian not already owned by Comet, on the basis of one Comet share plus £3.50 for every three Caledonian shares.

The highest price paid by Comet in the market was 130p and the company says that an all-cash alternative in excess of this figure will be provided.

Comet says that it intends to expand and develop Caledonian's home improvement division which, in 1977-78, contributed just over a quarter of the group's profits. The company envisages no change in the existing operation or management style of the jewellery division but says that it would not be the intention to retain the engineering and hosiery divisions as long-term investments.

A disposal of these divisions would, however, only be made on the basis that the purchaser was "a more logical partner and appropriate assurances regarding future employment and well-being of staff were received."

The directors of Caledonian have obtained assurances from Comet that the employees will be retained on terms no less favourable than those presently enjoyed.

Upon the offer becoming unconditional, Mr. W. R. Burns and Mr. B. A. Neiman will join the board of Comet.

Prust revises Guthrie net assets

Laurence Prust, the leading plantation sector stockbroking firm, has radically revised its valuation of Guthrie Corporation which it made only 5 weeks ago. The net assets of Guthrie are 515p per share, says Prust, not 430p per share which it was saying in January.

Guthrie Corporation is currently the subject of a 425p per share cash bid from Sime Darby Holdings.

The revision has been made in the light of Guthrie's defence against the bid. Guthrie valued three of its plantation estates on the basis of their property development potential instead of just their agricultural use. Prust says the valuation, although high for agricultural purposes "appears to us to be entirely reasonable."

Prust does not value the rest of the estates as highly as C. H. Williams, Guthrie's valuer does. Prust's estimate of Guthrie's total net assets is still well below the 628p per share, which Guthrie claims. But Prust says that its own valuation of the rest of the estates might be considered "conservative."

"Our rule of thumb values are based on prices at which land last changed hands in reasonable parcels. Prices of palm oil and rubber have risen in the meantime."

Prust's revised valuation was issued on Monday, the day that Guthrie's shares rose 30p to 473p. They climbed another 12p to 485p yesterday.

Mr. James Scott, the chief executive of Sime Darby returned to London last Friday.

BOC DEAL IN JAPAN

An agreement has recently been concluded between Ishikawajima-Harima Heavy Industries Company and BOC, that IHI should sell oxygen plants employing Pressure - Swing Adsorption technology, manufactured by BOC.

BOC is the leader in development of PSA technology, with experience of building plants for production of oxygen, nitrogen, argon, carbon monoxide, hydrogen, nitrous oxide, etc., using this technology.

IHI will be the exclusive distributor for BOC oxygen PSA plants to be used for waste-water treatment applications in Japan, and will import plants from UK through Nichimen Company. A demonstration plant will be imported by IHI in the near future and sales will commence immediately.

PETER PAN SHARES SUSPENDED

Shares of Peter Pan Bakeries were suspended yesterday at 40p, which valued the group at about £219,000. The suspension was made at the company's request pending clarification of its financial position.

In the group's last report and accounts, for the financial year ending March 31, 1978, the group showed losses of £13,422, compared with £12,683. Net assets were about 49p a share.

J. E. ENGLAND

The directors of J. E. England and Sons (Wellington) state that the holding of 356,250 ordinary shares (5.125 per cent) formerly held by Merestock was acquired by Brownstyle on August 23 last year and that Brownstyle have since sold 116,250 ordinary shares.

Ferguson raises stake in Breedon to 8.7%

Ferguson Industrial Holdings is building up its stake in Breedon and Cloud Hill Lime Works. Last week it purchased 120,000 shares and now holds 354,300 shares, 8.7 per cent of the group's equity.

The company secretary of Ferguson confirmed yesterday that the group had been buying shares for some time in Breedon. He would not comment on whether the group might eventually emerge as a bidder for Breedon.

On the Stock Exchange yesterday Breedon's shares rose 4p to 134p which values the group at £5.4m. In Breedon's last balance sheet for the year ending January 31, 1978 there were net assets of 46.9p a share.

FITZROY TO REORGANISE

Fitzroy Investment, the invest-building and engineering group, yesterday asked for its shares to be suspended pending the announcement of a major re-organisation within the group.

Fitzroy's shares were suspended at 20p which values the group at £832,000.

The anouncement came just shortly after Fitzroy revealed that it had sold Graysim Holdings with all its open air markets and certain market halls in a deal worth £220,000 in cash.

There is an earnings related payment maximum of £26,000 and a minimum of £13,000 per annum for five years.

The book value of the properties at September 30, 1978 was £195,000 and profit for a fifteen month period was about £20,000.

On the new re-organisation plan Fitzroy intends to send a circular to shareholders giving full details, and shareholders' approval will be sought at an extraordinary meeting which is scheduled in the third week of March.

ARMITAGE SHANKS DATE EXTENDED

The proposed merger of H. and R. Johnson-Richards Tiles and Armitage Shanks has been accepted so far by holders of 16 per cent of Johnson-Richards' ordinary shares and 35 per cent of the Preference. Holders of 39 per cent of Armitage Shanks have also accepted the offer which is now to be extended to March 12.

The rival offer by Norcros for Johnson-Richards is currently due to close on the same date.

The extension of acceptance period has been made "to allow the Johnson-Richards shareholders to evaluate the Norcros offer in the light of Johnson-Richards' response, which will be posted to Johnson-Richards' shareholders shortly."

CATTLE'S LOOKS TO LONGER TERM

Prospects for the rest of the year are bound to be depressed because of the rapid increase in interest rates writes Mr. R. Wanby, chairman of Cattle's (Holdings) in a circular to shareholders about the proposed £1.3m acquisition of Premier Clothing and Supply.

But Mr. Wanby says that the long term prospects of the company would be improved by the acquisition. Premier provides a unique opportunity to expand into Wales and the South West of England, he says.

The directors are seeking shareholders approval for the acquisition "because of the qualification which our reporting accountants have made in their report (on Premier)." The meeting will be held in Hull on March 15.

AMALGAMATED ESTATES

Mr. L. Phillips has sold a further 225,000 ordinary shares in Amalgamated Estates through Dawhurst properties, a company owned and controlled by Mr. Phillips. He now holds 7.24 per cent of the ordinary capital. Mr. F. Phillips has sold a further 23,000 ordinary shares in Amalgamated through Suburban and City Investments, a company controlled by Mr. Phillips who now holds 26.8 per cent of the capital.

REX STEWART

Ownership and control of Rex Stewart and Associates, the £20m turnover UK advertising group, has been passed to a trust. Mr. George Stewart, chairman, says the move is necessary to secure the company's future.

As majority shareholders, Mr. and Mrs. Stewart have transferred by gift their total holding in the private company of Rex Stewart and Associates to a directors' and employees' trust.

INTEREUROPEAN

Associated Communications Corporation has purchased 100,000 shares at 86p in Intereuropean Property, bringing its holding up to 57.3 per cent of the capital.

B'ham Mint explains sale

Coin and medallion minting group Birmingham Mint is receiving a total of about £850,000 from the sale of its Mint Security company to Security Services, the quoted subsidiary of Securicor Group.

Mint Security was formed in March 1972 as a wholly-owned subsidiary of the Birmingham Mint to supply security guard services.

In his letter to shareholders explaining the sale, Dr. B. J. A. Bard, chairman of Birmingham Mint, says that the rapid growth and success of Mint Security in the market was accompanied by an unprecedented escalation in criminal violence against security transport operators during 1978.

"A smaller company such as Mint Security, which could not achieve the same spread of risk as the larger operators, was likely to find it increasingly difficult to obtain adequate insurance cover at an economic cost. In order to obtain such cover, it was also evident that further considerable investment in protective equipment was necessary for the same level of turnover."

With an increased financial commitment looming for the further development of Mint Security, the Board took the decision to sell.

In addition to the sale proceeds, Birmingham Mint will receive any ultimate benefit of an insurance claim amounting to £83,371 which is subject to litigation and for which full provision was made in the accounts for the year ending April 1, 1978.

The cash consideration of £850,000 exceeds the book value of the assets transferred and will give rise to an [illegible] profit in the group [illegible] the year to March 31 1979.

WERELDHAVE/EPC

English Property Corporation's shares rose to 62p yesterday before settling back to 61½p, still 1½p above the highest and latest offer from Olympia and York, the private Canadian company.

The key question now is whether Wereldhave, the Dutch suitor, will come back with another bid supported by the cash it is due to receive from the Bronfman brothers in its deal over Trizec.

The Bronfmans have agreed to pay Wereldhave a substantial premium over market price for the 10 per cent of Trizec which Wereldhave is promising to relinquish if it gets control of EPC. The figure is thought to be between C$35m (£15m) and C$40m (£17m).

Full details of the agreement have not been released, but Wereldhave has promised to consolidate EPC's independent 20 per cent holding in Trizec, Canada's second largest quoted property company, into Carena Properties. Carena is 51 per cent owned by the Bronfmans and holds 60 per cent of Trizec. EPC has 49 per cent of Carena.

The Wereldhave / Bronfman deal, therefore, effectively reduces EPC's present 50 per cent holding in Trizec to 40 per cent. However, under the present state of affairs, EPC's half share does not give it voting control of Trizec. The proposed deal between the Bronfmans and Wereldhave includes a pact to share the management control.

This, claims Morgan Grenfell, Wereldhave's advisers, "unlocks control of Trizec" and makes it much more valuable to the owner of EPC.

SHARE STAKES

Broadstone Investment Trust—London and Manchester Assurance has increased its holding from 1,193,166 shares to 1,339,332 (10 per cent).

Group Investors—Sun Life Assurance Society has increased its holding to 600,000 shares (9.03 per cent).

Haslemere Estates—Phoenix Assurance sold its entire holding of ordinary shares and convertible loan stock on February 23.

NSS Newsagents—P. H. Byam-Cook, director, has sold 2,346 preference and 28,463 ordinary shares.

Crosby House Group—Jazerite Holdings has become interested in £58,330 10 per cent convertible unsecured loan stock and 2,750 ordinary shares making total holdings £64,388 loan stock and 5,750 ordinary shares.

Sedgwick Forbes Bland Payne Group—Midland Bank now has an interest in 88m shares (41.84 per cent).

Magnolia Group (Mouldings)—Royal Exchange Trustee Nominees has acquired 104,000 shares.

Assam Frontier Tea Holdings—Scottish Northern Investment Trust now holds 75,000 ordinary (7.97 per cent).

Fairdale Textiles — Menteith Investment Trust and subsidiary have acquired 430,000 shares (10.85 per cent).

Wm. Mowat and Sons—Following sales of shares in which B. Linden was beneficially interested are notified: 10,000 on February 6, 10,000 on February 14 and 10,000 on February 20. Shares were registered partly in name of N. C. Head Office Nominees and partly in name of Strand Nominees.

GOPENG CONSOLIDATED LIMITED

Extracts from the Statement of the chairman, Mr. J. D. Hellings, O.B.E., F.I.M.M., circulated with the Report and Accounts for the year ended 30th September, 1978.

The Consolidated Accounts for the Group's financial year ended 30th September, 1978, show a gross mining profit before depreciation of £2,856,355 compared with £2,342,391 in the previous year.

Mine production was marginally lower due to a reduction in the amount of ground treated. This was caused by an *unusually long period of drought, which adversely affected* pressure water supplies, both at the mining areas and at the power generating stations. Nevertheless, with the average tin price received improving from $756 per picul to $919 per picul, a similar grade of ground treated, and costs well controlled, a satisfactory increase in the operating profit was obtained.

After taking into account investment and sundry income, the overall profit from the mines and estates amounts to £2,733,291. The ultimate balance available for the year was £1,044,540 from which dividends of 18 pence per share have been declared (compared with 15 pence in 1976/1977).

During the year 28,343 piculs (1,714 metric tons) of tin-ore were produced from 9,825,800 cubic yards of ground mined, with an average recovery grade of 0.29 kati *(0.39 lb.)* per cubic yard.

In the first four months of the current financial year 10,769 *piculs (651 metric tons) of tin ore have been produced* compared with 9,184 piculs (555.3 metric tons) during the corresponding period last year, and the General Managers' conclusion is that overall production is likely to be similar to that of the previous year.

The joint development of Mambang Di-Awan Sendirian Berhad with the Syarikat Permodalan dan Perusahaan Perak Berhad is *proceeding satisfactorily.* An agreement has been entered into with a well known firm of dredge designers to equip the Kampar leases with a new dredge suitable for the prevailing conditions in the area. The present programme *anticipates that* productive *operations will be* commenced in the latter part of 1980.

Since my last statement, the situation in regard to tin has not changed significantly, except that there is now some indication of increased production resulting from the higher metal price, the peak of the latter having been reached in November.

In the short term the influence of continuing discussions about proposals to release a significant tonnage from the U.S. strategic stockpile have had an unsettling effect and appear to have been responsible for the erratic movements on the *metal market. If it is decided to release a substantial quantity* of tin it is to be hoped that it will be done in such a manner as will have a stabilising, rather than disrupting, effect on the price of the metal. This will always be the governing factor in the development of new sources of supply.

In the longer term, the much greater capital required to equip and operate the lower grade reserves now principally in prospect will mean that future investors will require greater protection for their investment. The much longer period required to recoup this latter will have to be taken into account when assessing the stability of mining propositions, and in this, security of tenure over the leases to be worked and the right of selection for the successful prospector are essential.

Turning once more to our mining operations, you may be interested to know of the successful introduction of a dry mining process by the General Managers. This process, which involves the use of mechanical loaders, dump trucks, and automatic monitors, provides a more flexible and suitable method for the shallower reserves now being treated and is a considerable improvement on the older method for this type of deposit.

The prospect for the current year, subject to the usual hazards of rainfall and the metal price can therefore be looked upon with confidence.

LEGAL NOTICES

IN THE MATTER OF
THE COMPANIES ACT, 1948
AND IN THE MATTER OF
TALAMO PROPERTIES LIMITED

NOTICE IS HEREBY GIVEN that the creditors of the above-named Company, which is being voluntarily wound up, are required on or before the 16th March 1979, being the day for that purpose fixed by the undersigned,
AM HOMAN,
of PRICE WATERHOUSE & CO.,
32 London Bridge Street,
London SE1 9SY,
the Liquidator of the said Company, to send their names and addresses and particulars of their debts or claims and if any security held by them, and the names and addresses of their Solicitors (if any), to the undersigned, and if so required by notice in writing from me, the said Liquidator, are by their Solicitors or personally, to come in and prove their said debts or claims, *and to establish* any title they may have to priority, at such time and place as shall be specified in such notice, or in default thereof they will be excluded from the benefit of any distribution made before such debts are proved, or such priority is established, or, as the case may be, from objecting to such distribution.

Dated this 22nd day of February 1979.
AM HOMAN, Liquidator.

LECTURES

GRESHAM LECTURES IN ASTRONOMY
COMETS AND CATASTROPHIES
by Dr D W Dewhurst
3 ONE-HOUR LECTURES AT
The City University,
Northampton Square, EC1
at 5.45 p.m. March 1, 8, 15
Admission Free

EDUCATIONAL

ART GALLERIES

TRAVEL

Companies and Markets

UK COMPANY NEWS

Metalrax profits expand 44%—pays 30% more

THE directors of Metalrax (Holdings), engineering group, report a 44 per cent rise in taxable *profits* from £1.47m to a record £2.11m for 1978. Turnover was well ahead from £11.04m to £17.04m.

There was a 56 per cent rise in profits to £922,886 at the interim stage, and the directors said they were confident the second half would show a further improvement.

Earnings per 5p share are *shown as 7.52p (5.9p) and the* dividend is effectively increased from 1.0292p to 1.353p net—a near 30 per cent rise—with a final of 0.903p. The dividend rise is made possible by current rulings on cover by the Treasury, and subject to its consent.

Also announced is a one-for-10 scrip issue.

Tax for the year took £906,000 compared with a previous £603,000 and after adjustments, available profit emerged at £1.19m against £852,000 last time. The amount retained was £936,000 (£716,000).

● comment

Metalrax's result is impressive and comes as the latest in a *series of profit increases stretching* back over 10 years. However, the rate of growth has slowed and around £250,000 of the £642,000 increase in pre-tax profits can be attributed to recent acquisitions (almost £180,000 from Bacol which added £63,692 to the 1977 figure and the rest from Joseph Fray). But the remaining organic growth is based on improved performances for all the group's subsidiaries. About 20 per cent of group business comes from electrical contracting and, while this side did not benefit to the same extent as the rest of the activities from higher throughputs and better margins, it did record a significant advance. The company has been able to take advantage *of its strong result to increase* its dividend beyond 10 per cent, even so, the dividend is covered 5.6 times. The shares rose 3p to 56p on the news giving an undemanding p/e of 7.3 but a rather unattractive yield of only 3.7 per cent.

Second half upsurge gives Plantation Holdings £4m

AS EXPECTED, there was a marked improvement in second-half taxable profits at **Plantation Holdings**—up from £1.6m to *£2.74m—leaving 1978 profits only* marginally lower at £4.02m against £4.13m. Interest increased from £164,000 to £368,000.

In December, the directors said that the group had experienced a difficult first half—pre-tax profits down from £2.52m to £1.28m—but indications were that the second six months would show a marked improvement. They then expected full-year taxable profits to be £3.8m.

Turnover increased from £34.54m to £40.7m. After tax of £1.5m (£1.68m), stated earnings per 10p share are 6.2p (6.1p).

The directors state that, as foreseen, the division of Plantation Holdings into a Malaysian company and a UK company is proceeding as rapidly as possible.

Since dividends paid by the Malaysian company will not be subject to UK advance corporation tax, it is at present intended that no final dividend for the year under review should be paid. Instead, a special *interim* dividend should be declared and paid by the two new companies shortly after the scheme of reconstruction is implemented.

The total gross cost of these dividends, say the directors, will be equal to the maximum final dividend which could have been paid under present legislation by Plantation Holdings—so far as UK resident shareholders are concerned, a final of 1.36p making 2.433p.

Assuming that the division proceeds according to plan, it is expected that the payment by the two new companies will be made during this July. If for *any reason the scheme is not* implemented, add the directors, then payment will be made by Plantation Holdings.

After extraordinary items—goodwill written off of £1.87m (nil) and other debits totalling £719,000 (£117,000)—there is an attributable deficit for 1978 of £73,000 compared with a £2.33m surplus.

Multi-Purpose Holdings Bhd *owns 64.44 per cent of Plantation* Holdings' capital.

LASMO loss up to £12.43m

AN INCREASED loss for 1978 of £12.43m against £7.86m is reported by **London and Scottish Marine Oil Company.**

This figure is struck after interest payable of £12.52m *(£10.41m)* and interest receivable of £91,000 (£2.55m).

The directors say the loss arises almost entirely from interest charges in respect of unsecured loan stock and bank *finance raised for the development* of the company's share of the Ninian field.

At halfway, there was a loss of £5.39m against £3.4m.

Earlier this month the directors said current cash flow projections show that cash generated from sale of oil will consistently provide a surplus over expenditure from the final quarter of this year. It will also be possible to repay bank *borrowings ahead of schedule.*

● comment

The heavy burden of financing its share of the Ninian oil field is the only reason why London and Scottish Marine Oil's pre-tax losses have jumped from £7.9m to £12.4m. There is now a deficiency on shareholders' funds of around £6m which will probably increase during the current year. However, Lasmo is now loading its first cargo of oil at Sullom Voe and assuming an *average field output of 150,000* barrels a day in 1979 Lasmo's total share should be around 4m barrels which at the current price of just under $16 per barrel should result in a net revenue of £25m. Holders of the oil production stock, which rose 5p to 455p yesterday may well receive their first payment in October. For ordinary shareholders, however, there is not likely to be any reward until 1981 at the earliest unless a takeover bidder appears.

English Association down midway

A fall in taxable profits from £115,387 to £77,340 for the half-year to December 31, 1978, is reported by **English Association of American Bond and Share Holders.**

The directors say the forecast increase in the rate of commission deducted from *dividends came into effect* towards the end of the half year and will make a substantial contribution to the year's profit.

New activities recently undertaken, and in particular the investment department, are starting to make satisfactory *contributions* to profits.

The company has recently sub-let its old office and is therefore relieved of the double rent, add the directors.

After tax of £35,765 (£45,532), earnings per £1 share are shown lower at 9.8p (16.5p). As known, the net interim dividend is the same at 4.875p—last year's total payment was 18.875p on pre-tax profits of £113,000.

Vanbrugh Life charges raised

Vanbrugh Life Assurance, the linked life subsidiary of the **Prudential Corporation,** is putting up its charges as from March 1 on certain of its contracts. As from that date, the annual fee on new contracts is being lifted from ½ per cent to ¾ per cent and will apply to its Capital Investment Portfolio, the Vanbrugh Investment Portfolio and the Maximum Investment Plans. Existing contracts are unaffected.

The company points out that in spite of rising costs over the past four years, it has maintained its annual fund management charge at ½ per cent since its launch in September, 1974. *This change brings the company* in line with the normal market rate.

Vanbrugh also points out that there is widespread concern within the life assurance industry over the effects on expenses of a sustained period of hyper-inflation. The linked life companies have no protection unlike a traditional life company with a large block of with-profit business, except through the annual management charge. Therefore it considers it prudent to cover this contingency by amending its new policies to include a provision enabling the company to vary the annual management charge. It does not foresee having to use this provision in the near future, but it does give the company protection against a substantial increase in expenses.

PENGKALEN LIMITED

Extracts from the Statement of the Chairman, Mr. J. T. Chappel, C.B.E., F.I.M.M., circulated with the Report and Accounts for the year ended September 30, 1978.

The pre-tax profit for the year, after taking credit for profits arising from the sale of investments, £24,342 and sale of leases being worked on tribute, £14,460, amounts to £155,329 compared with £372,081 in 1976/77. As forecast, *production was considerably lower at* 104.73 metric tons (208.57 metric tons in 1976/77) and while the average price received for our tin concentrates was higher at £3,419 per m. ton (£3,027 per m. ton in 1976/77), the lower production has meant that the dredge operated at *marginal profitability* during the year, the majority of profits arising from other sources.

After taxation of £32,705 the net profit for the year amounts to £75,624 from which £72,000 has been distributed to shareholders by way of dividends totalling 4.5p per share. The balance carried forward at the end of the current year *is increased slightly by £3,624 to £257,770.*

The low output was due to the dredge operating throughout the year in previously dredged ground, including a period of six weeks when it was digging at flotation depth only in order to pass quickly through a very low grade area.

Agreement was reached, after protracted negotiations, with the Perak State Government, for the construction of a road deviation and new bridge over the Kinta river. The work is proceeding satisfactorily on schedule. The dredge was shut down during January for repairs and the rehabilitation work necessary to enable it to operate for at least a *further two years. It is now expected* to enter the ground to be released by the road deviation towards the end of March.

Much improved outputs should be obtained during the second *half of the Company's current financial year and,* provided satisfactory tin prices are maintained, the results for the year should show a substantial improvement over those of the year under review.

It appears that the world supply demand position for the metal is now more or less in equilibrium and the fluctuations in the tin price during the past year have reflected the prospect of tin being released from the American Stockpile. Much, therefore, depends in the short term on the policy adopted this year by the American Government. It is reasonable to expect that any proposed releases will only be carried out in full consultation with the International Tin Council, of which the United States is a member, with due regard to the effect on current tin prices and bearing in mind the need to stimulate new investment in the industry in order to meet the world's requirements in the longer term.

NOTICE OF ISSUE | ABRIDGED PARTICULARS

Application has been made to the Council of The Stock Exchange for the undermentioned Stock to be admitted to the Official List.

Lee Valley Water Company

(Incorporated in England on the 29th July, 1959, by the Lee Valley Water Act, 1959.)

OFFER FOR SALE BY TENDER OF
£2,500,000
8 per cent. Redeemable Preference Stock, 1986
(which will mature for redemption at par on 31st March, 1986)
Minimum Price of Issue £97 per £100 Stock
yielding at that price, together with the associated tax credit at the current rate, £12.31 per cent.

This Stock is an investment authorised by Section 1 of the Trustee Investments Act, 1961 and by paragraph 10 of Part II of the First Schedule thereto. Under that paragraph, the required rate of dividend on the Ordinary Capital of the Company was 4 per cent. but, by the Trustee Investments (Water Companies) Order 1973, such rate was reduced to 2.5 per cent. in relation to dividends paid during any year after 1972.

The preferential dividend on this Stock will be at the rate of 8 per cent. per annum and no tax will be deducted therefrom. Under the Imputation tax system, the associated tax credit at the present rate of Advance Corporation Tax (33/67ths of the distribution) is equal to a rate of 3 63/67ths per cent. per annum.

Tenders for the Stock must be made on the Form of Tender supplied with the Prospectus and must be accompanied by a deposit of £10 per £100 nominal amount of Stock applied for and sent in a sealed envelope to Barclays Bank (London and International) Limited, New Issues *Department, P.O. Box 123, 2, London Wall Buildings, London Wall, London, EC2P 2BU* marked "Tender for Lee Valley Water Company Stock", so as to be received not later than 11 a.m. on Tuesday, 6th March, 1979. The balance of the purchase money is to be paid on or before Friday, 30th March, 1979.

Copies of the Prospectus, on the terms of which alone Tenders will be considered, and Forms of Tender may be obtained from:—

Seymour, Pierce & Co.,
10, Old Jewry, London, EC2R 8EA.
Barclays Bank (London and International) Limited,
New Issues Department,
P.O. Box 123, 2, London Wall Buildings, London Wall, London, EC2P 2BU.
Barclays Bank Limited,
86, Town Centre, Hatfield, Herts, AL10 0JP.
or from the Offices of the Company at Bishops Rise, Hatfield, Herts, AL10 9HL.

MINING NEWS

Western Mining has a better half-year

BY KENNETH MARSTON, MINING EDITOR

AUSTRALIA'S Western Mining Corporation has enjoyed better than expected fortunes in the first half of its current year to June 30. The net attributable profit has moved up to A$8.04m (£4.49m), equal to 3.9 cents per share, compared with A$5.33m in the same period of 1977-78. The interim dividend is raised to 2 cents from 1½ cents a year ago when the final was also 1½ cents.

Looking at prospects for the second half, the directors comment that nickel demand continues to be strong following reduced world production and prices have moved up from the recent very low levels. They are of the opinion that supply and demand are likely to come into better balance during 1979.

Western Mining's nickel sales in the first half were 47 per cent up on those of a year ago and costs were lower. Revenue from nickel and co-products were 26 per cent up, reflecting the higher sales and a larger proportion of metal in the sales mix, but the gains were reduced by the substantially lower nickel price and an unfavourable U.S.-Australian exchange rate.

The group's gold mining interests did well in the past six months, notably the 50.5 per cent-owned *Central Norseman* which lifted earnings for the period to A$5.96m from A$3.62m. And Western Mining's share of the dividends declared by Alcoa of Australia in the period amounted to A$3.2m compared with A$1.7m a year ago.

● **comment**

If Western Mining raises its final dividend to, say, 3 cents the shares at their current 183p would still yield less than a meagre 2 per cent. But this is unlikely to deter buyers who, seeing the existing nickel interests coming right in a changed climate for base metals, will focus more attention on the group's outstanding longer term growth potential. Of the major new projects there is the Wilga (previously Benambra) copper-lead-zinc-silver deposit in north-eastern Victoria which could be developed in about two years and a virtual free carried interest of 75 per cent in the A$320m Yeelirrie uranium venture in Western Australia which is expected to be in production by the end of 1984. Looming over all, however, is the huge Olympic Dam copper-uranium prospect at Roxby Downs in South Australia. It could cost over A$1bn to develop and major world natural resource groups are already seeking partnerships. But investors looking for a good return from this all-Australian company must take a very long-term view.

EZ makes sharp recovery

EZ INDUSTRIES, the Australian producer of zinc and other base metals, yesterday signalled its return to relative prosperity with an announcement of net profits of A$6.94m (£3.87m) for the 28 weeks to January 10.

In the same period of its 1977-78 financial year there was a loss of A$685,000 and the final outcome for the year of a A$531,000 net profit was only realised because of a tax credit.

The 1978-79 interim dividend is 5 cents (2.79p). There was no interim in the previous year and the payment to shareholders was confined to a final of 5 cents.

EZ has been able to respond to a recovery on the zinc market by raising production to near-capacity. Output in the latest half year was 32 per cent above the comparable period. At the same time prices were improved.

● **comment**

The group's recovery should continue in the second half provided other international producers hold back their output to an extent EZ has failed to do. Production cutbacks have led to a better international supply-demand balance and stocks have been run down. In 1978 there was a rise in zinc consumption of about 4 per cent. This year the rise could be 2-3 per cent.

Zinc prices have been on a gentle upward trend since last July and although general economic prospects are patchy the rise could continue for several months yet. But London Metal Exchange prices—the settlement price was £395 a tonne yesterday—are still only fluctuating around the average level for the year to March, 1977 of £403.14 a tonne. EZ shares in London yesterday were 290p.

ROUND-UP

Northair Mines, the small gold-silver-lead-zinc producer working north of Vancouver, had a net profit of C$862,000 (£357,900) or 16 cents a share in the nine months to last November compared with a profit of C$95,000 or 2 cents a share in the same period of 1977. The company became debt free in the middle of last month.

Copper lifting Teck profits

AN EAGER participant in the metal price recovery is Canada's Teck Corporation which now has a larger UK investment following as a result of its recent acquisition on a one-for-three share basis of Yukon Consolidated. In the same deal Teck also acquired **Brameda Resources** which held 32 per cent of Yukon and a 50 per cent *stake in the Bullmoose* coking coal project in British Columbia.

As a result of its vigorous expansion policy in recent years Teck's interests include copper, zinc, molybdenum, niobium, coal, gold, silver, geothermal power and oil and gas. The 1978 annual report shows that total assets have now grown to C$282m (£116m).

Last year net earnings reached $4.5m, or 65 cents per share, before extraordinary items, compared with $4.08m, or 59 cents, in 1977. As with other metal producers, Teck enjoyed a sharp recovery in second half 1978 thanks to improved zinc and copper prices, the latter coming into the picture with the first five months' earnings—equal to 20 cents per Teck share—of the new 65 per cent-owned Afton copper-gold mine in British Columbia.

Also in British Columbia is the big copper-molybdenum operation of **Lornex Mining** in which Teck now has a stake of 21 per cent as a result of its acquisition of Yukon Consolidated. The major holder of Lornex is, of course, London's **Rio Tinto-Zinc** group.

● **comment**

Copper is going to play a major role in providing increased earnings for Teck this year via a full 12 months' operations of Afton and the recently acquired interest in Lornex.

Last year Afton received an average price of U.S. 65 cents per pound for its copper, whereas the U.S. price is now around 90 cents. And it has been estimated that every Canadian 5 cents rise in the price increases Teck's earnings per share by some 21 cents. Similarly 2 cents per pound on zinc means almost 4 cents in Teck earnings.

Teck has other mineral interests awaiting development when product prices are ripe, these including the low grade Highmont copper-moly property which adjoins that of Lornex, a 24 per cent stake in the now closed Madeleine copper mine Quebec, and the Bullmoose coal project.

Earnings per share this year could well reach $2 which would give scope for a reasonable increase in the 21 cents dividend, bearing in mind the long term debt of $123m. However, these prospects are discounted to a large degree by the current share price of around $13 which gives an indicated yield of not much over 2 per cent.

INCO SETTLES IN MANITOBA

The possible strike threat has been averted at Inco's Manitoba operations which provide some 25 per cent of the big nickel producer's Canadian output. A new wage agreement reached with the United Steel Workers of America has been approved by the union's members on a two-to-one vote.

The new contract will run for 30 months and replaces the existing deal which was due to expire today. It is understood that the terms of the agreement are pretty much in line with those that were rejected by Inco's Sudbury, Ontario, employees where the strike which began in mid-September is still continuing.

NatWest jumps to £297m

Freddie Mansfield

Mr. Robin Leigh-Pemberton chairman of National Westminster Bank, pictured in the bank's World Money Centre the Foreign Exchange and Euro Currency Dealing Room in London.

SECOND HALF profits of the National Westminster Bank increased from £127.73m to £188.53m taking the total for 1978 up to a record £297.4m—an increase of 25 per cent on the previous year.

Mr. Robin Leigh-Pemberton, chairman, says that while the level of interest rates rose steadily during 1978 the average base rate for the year at 9.11 per cent was only marginally higher than in 1977.

There was, however, a significant increase in the level of the group's business including healthy growth in current account balances and recovery of some ground lost in 1977 in 7-day deposit account balances: in addition there was a further improvement in the bad debt experience.

The chairman reports that all divisions increased their contributions to group profits, particularly on the domestic front. A domestic banking contribution to profits to 62 per cent represented an increase of 35 per cent in money terms on the previous year.

Referring to the current year the chairman states that if interest rates continue for any length of time at present levels, the group's domestic banking earnings will benefit, though the instalment credit business will not.

After all charges the profit attributable to ordinary holders came through at £182.4m compared with £166.3m. Earnings per £1 share are stated to be up from 75.1p to 80.9p basic or to 76.8p fully diluted.

The dividend is increased from 11.45779p to 12.83237 net, with a final of 7.15037p.

The chairman points out that several accounting changes have been introduced this year, the most noteworthy of which is the changed treatment of deferred tax. As a result of adopting SSAP 15 the current year's tax charge has been reduced by £51m and £140m has been released to reserves as a prior year's adjustment of which £86m relates to 1976 and earlier years. Provision has been retained for £125m (£51m) in respect of potential liabilities for deferred tax of £316m (£191m).

The group's results also reflect new accounting policies in respect of provision for bad and doubtful debts and gains/losses on disposal of investments: Comparisons have been re-stated.

For bad and doubtful debts the averaging procedure followed since the 1969 accounts have been discontinued and under the new policy the aggregate provisions made during the year (less amounts released) are charged against profits. This change has no material effect on the total charge against profits.

Movements of the group provision during 1978 were: provision at January 1, 1978, £236.5m, charge against profits £32.1m making £258.6m: amounts written off, less recoveries, £19.5m, leaving the provision of £239.1m at December 31, 1978.

The chairman explains that it is group practice to consider both specific and general factors in assessing the overall level of provisions required against advances.

The specific element arises as a result of the year-end appraisal of identified risk advances and the group's tax charge reflects the tax relief which arises when such provisions are made.

The general element arises in relation to latent risks which are present in any portfolio of bank advances but which have not been specifically identified. This part of the provision does not attract tax relief but, in considering its adequacy, the directors recognise that in the event of its use against specific bad debts, tax relief would then arise.

Bad debts are written down to estimated realisable value when the normal banking relationship ceases. Interest on advances up to that time is credited to profits and provisions made as appropriate.

The chairman said yesterday that the specific element of the provision last year had been "significantly down" while the general element had shown an increase. He said that the bank's bad debt experience continued to be "very satisfactory."

In previous years gains or losses on disposal of dated stocks were taken to an investment suspense account and transferred to profits by five annual instalments. Under the new policy such realised gains or losses are taken to profits in the year of disposal.

Franked investment income was previously grossed-up for UK corporation tax at the current rate; under the new policy it is grossed-up only for the imputed tax credit.

The effect of these changes is that the restated group trading surplus for 1977 is £10m higher than previously published.

	1978 £m	1977 £m
The Bank group	295.4	235.0
Share of associates	15.5	12.5
Group profit	310.9	247.5
Profit-sharing	13.5	[illegible]
Profit before tax	297.4	232.7
Taxation	111.6	[illegible]
Net profit	185.8	[illegible]
Minorities	2.7	1.4
Preference dividends	0.7	0.7
Extraord. debits	0.5	1.6
Attributable to bank	182.4	[illegible]
Interim dividend	12.9	11.0
Final proposed	16.2	14.2
Retained	153.3	[illegible]

See Lex

INTERNATIONAL COMPANIES and FINANCE

NORTH AMERICAN NEWS

General Motors plans major Mexican expansion

BY JOHN WYLES IN NEW YORK

GENERAL MOTORS Corporation yesterday announced a significant expansion of its activities in Mexico, including plans for a new passenger car assembly plant, a new engine manufacturing plant, and two new component production facilities.

The world's largest automotive company declined to attach a figure to its new investment in Mexico, but it may well be the largest single foreign development by a Detroit company since Ford Motor Company's $500m construction of a new production plant at Valencia, Spain.

The Mexican car and truck market has been one of the fastest growing in the world in the last few years. GM's retail sales leaped 50 per cent to 0,000 last year and Ford's factory sales 38 per cent to 68,000. Both U.S. companies significantly outpaced the market which grew by 25 per cent in 1978.

GM's announcement came just four days after disclosure of its purchase of Chrysler's facilities in Venezuela and Columbia and underscores its determination to increase the size and profitability of its overseas operations. Its plans call for a new assembly plant near Saltillo with a production capacity of more than 100,000 units a year and total two-shift employment of about 2,500. Completion is due in late summer or early autumn of 1980 and GM's existing plant will switch to the exclusive production of trucks.

In addition, work on a new engine plant will be completed by mid-1982 and this is planned to produce 1,800 V8 engines a day on three shift working, employing about 2,200. The company's existing engine plant at Toluca and its foundry will not be affected.

Lastly, GM says it will build new facilities near Juarez to produce engine idle speed controls and automotive trim and the company's automotives wiring operation also at Juaraz, will be expanded.

All of the expanded vehicle output is intended for the Mexican market, but it is possible that some engine and idling equipment will be exported. This would be necessary to comply with Mexican requirements for exports to compensate for imported components used in domestic vehicle manufacturing.

Asbestos Corporation hits at valuation

By Robert Gibbens in Montreal

A STUDY commissioned by the Quebec government which valued Asbestos Corporation shares at C$40 each is "totally wrong," according to Mr. Maurice Taschereau, the Asbestos Corporation president.

Mr. Taschereau said parts of the study, done by New York investment bankers Kidder Peabody, are inconsistent and "deviates from accepted analytical techniques." He said the study disregards potential future price increases when analysing future revenues, and applied a "patently inappropriate" discount rate.

Quebec is negotiating for control of the group with its major shareholder General Dynamics of the U.S. and has produced legislation to expropriate the company as proof of its seriousness. General Dynamics is represented by Lazard Freres and Co., New York, which has valued the Asbestos Corporation at almost C$100 a share.

Asbestos Corporation yesterday reported 1978 earnings of C$15.7m, or C$3.51 a share, against C$21m, or C$7.40.

AMC to double Jeep manufacturing capacity

BY KENNETH GOODING, MOTOR INDUSTRY CORRESPONDENT

AMERICAN MOTORS (AMC) will spend nearly $100m to double its manufacturing capacity for Jeep utility vehicles and to provide extra marketing and distribution back-up in the three years to 1981.

By that year, output of Jeeps will rise from 170,000 a year to 350,000 a year, said Mr. W. Paul Tippett Jr., president of AMC, at the International Motor Show in Geneva yesterday.

This should enable the number of vehicles for export also to be doubled to around 40,000 a year.

But the increase in capacity has enabled AMC and Renault to push ahead with plans, revealed for the first time yesterday, to market Jeeps in French-speaking West Africa—countries such as Zaire, Gabon and the Cameroons.

AMC estimates that it will sell 7,000 Jeeps, mainly in very basic form, in these territories in the initial stages when marketing begins next year.

In Western Europe, Jeep sales in 1978 jumped 150 per cent, but they were still at a nominal 3,500 vehicles.

Gimbels president resigns

NEW YORK—Mr. James A. Connolly has resigned as president and chief operating officer of Gimbels New York, effective immediately, to pursue unspecified other business interests.

Gimbels New York is a subsidiary of Brown and Williams Industries, which in turn is a subsidiary of British American Tobacco. Gimbels is part of the Brown and Williamson retail group, formed earlier this month.

Mr. Connolly's resignation comes in the wake of a radical shake-up at Gimbel Brothers and at the SAKS store chain, with both being brought into a new Brown and Williamson retail group. The president of SAKS was chosen to head the new B and W retail set-up.

Reuter

14% gain in profits at ABC

By Stewart Fleming in New York

AMERICAN BROADCASTING, the third largest of the U.S. television broadcasting networks, but the one which has been leading the field in terms of the popularity of its programmes, yesterday reported a 14 per cent gain in fourth quarter earnings.

Net income from continuing operations rose from $34.7m to $40m, and earnings from $1.27 a share to $1.45 a share.

For the full year, net income increased from $106.9m, or $3.92 a share to $127.5m or $4.60 a share, with revenues rising from $1.5bn to $1.8bn.

The company said that the ABC Television network posted record revenues and profits, and so too did its publishing operations. The record division, which has been a drag on earnings, again suffered substantial losses, but the company has already disclosed that it is selling this operation to MCA.

Agreed bid for Ticor

By David Lascelles in New York

SOUTHERN PACIFIC, the railroad company, announced agreement in principle to buy Ticor, the Los Angeles-based insurance company, for about $258m. The deal follows the unsuccessful attempt earlier this month by American General Insurance of Houston to take over Ticor with an offer worth $35 a share. Ticor rejected the bid claiming it was not in shareholders' interests and might pose anti-trust problems.

Southern Pacific's offer, worth $40 a share, includes the purchase from American General of the 375,000 Ticor shares it owns. The deal will be financed with a combination of cash and debt securities, in proportions yet to be worked out.

One condition of the deal is that the takeover Ticor was planning of Pennsylvania Life should be halted.

Dow Banking's Iranian loan

ZURICH — Dow Banking Corporation has fully recovered the principal, interest and overdue interest on a short-term interbank U.S. dollar deposit by a small commercial Iranian bank, and has stopped legal moves aimed at recovering the funds.

About two weeks ago, the Swiss-based subsidiary of Dow Chemical moved to block the assets in New York and London of The Iranians Bank because it had allegedly defaulted on the deposit.

A senior official at Dow said the money was paid back in the past few days and friendly relations had been restored with The Iranians' Bank.

AP-DJ

INTERNATIONAL CAPITAL MARKETS

Record interest rate for Bell Telephone issue

BY OUR NEW YORK CORRESPONDENT

INTEREST RATES on top quality utility company new issues hit a new peak in the current interest cycle yesterday when South Central Bell Telephone's 40-year bonds were offered to investors at a yield of 9.663 per cent.

South Central Bell is widely seen as one of the best quality issuers among American Telephone and Telegraph subsidiaries. For this reason traders and investors were watching closely to see how the $250m of triple-A rated securities was priced and how quickly the syndicate which won the competitive bidding to sell the bonds would be able to retail them.

Dealers had been anticipating that the triple-A rated bonds would yield between 9.6 per cent and 9.65 per cent. The offering price of 9.663 per cent was thus seen to be quite generous. One analyst remarked that if the issue was not well received at this level then this could have a negative impact on the bond market.

The generous yield was seen in part to reflect the weakness in the bond markets which has developed in the past month in response to signs of accelerating inflation and the unsettled international situation.

One measure of how the market has fallen is that on January 16 Bell Telephone of Pennsylvania, another A T and T subsidiary whose bonds are rated triple-A but are generally not so highly regarded by investors as the South Central Bell issues, sold $150m of 40-year debentures at a yield of 9.37 per cent.

Last week Texas Electric Service Company sold $75m of 30-year bonds, also triple-A rated, at a yield of 9.57 per cent, the highest yield on a triple-A rated electric power company bond since 1974.

$24m Tanzanian loan completed

BY FRANCIS GHILES

THE FIRST syndicated loan for Tanzania has been completed. Air Tanzania Corporation is raising $23.97m, half of which is funded by the U.S. Eximbank at a fixed rate of 8¼ per cent, the other half of which was syndicated among six banks led by BankAmerica International. On this tranche the borrower is paying a spread of 1½ per cent for 10 years.

The same bank is arranging a $25m 10 year credit on a split spread of 1⅜ per cent for the first five years rising to 1½ per cent for Conadi, an economic development agency backed by the government of Honduras. This credit carries a three-year grace period and is being syndicated among a small group of banks.

The Brazilian airline, Varig, is arranging a financial package amounting to at least $200m, of which $78m will be in the form of commercial loans. The first part is split into two tranches. A 3½-year tranche, amounts to $29.5m, carries a spread of ⅞ per cent, and a 12-year tranche, amounting to $40m, carries a spread of 1⅞ per cent. The second part of this loan amounts to 8.5 per cent and is related to the cost of Canadian-provided equipment. Terms include a spread of 1⅞ per cent and a maturity of 12 years.

The Mexican oil company Pemex is arranging a $50m loan for five years through a group of seven banks led by Midland Bank. The borrower is paying a spread of ⅞ per cent throughout and there is no grace period.

Fourth quarter setback for IU International

BY OUR NEW YORK STAFF

IU INTERNATIONAL'S attempt to reduce the exposure of its shipping subsidiary, Gotaas Larsen, has resulted in a $41.76m fourth quarter loss.

Anticipating a major increase in demand for liquefiednatural gas (LNG), Gotaas Larsen was responsible more than five years ago for one of the largest block orders ever placed for giant LNG tankers. Four of the six have so far been delivered, but a much slower than expected development of the LNG market has prompted IU to cancel one $200m tanker contract and to defer delivery of the remaining vessel from the Kawasaki shipyard in Japan for four years. The $28.9m cancellation penalty is part of a $55.6m special charge in the fourth quarter, which reflects an attempt to trim Gotaas Larsen's future stantial loss and is likely to prime its fleet futrher.

The fourth quarter loss compared with net income of $13.4m in 1977, and revenues during the period were $574.23m against $602.5m. Full year income fell from $58.8m on $1.74 per share to $12m on 30 cents per share. Revenues rose from $2.28bn to $2.56bn.

Mr. John Seabrook, chairman and chief executive, states that the extraordinary charges obscured the good performance of most of the company's subsidiaries.

Resorts wins licence battle

By Our New York Staff

RESORTS INTERNATIONAL has won its year-long battle for a permanent licence to run its new casino in Atlantic City, the first of its kind outside the State of Nevada. The victory appeared to clear the way for many of the other companies developing casinos in the New Jersey resort, and the shares of companies with gambling interests soared on the news.

The ruling on resorts was made by the New Jersey Casino Control Commission which has been holding six weeks of hearings into the company's application for a permanent licence.

Its application was strongly opposed by the state's gaming enforcement authorities on the grounds of Resorts' alleged connections with organised crime

Sterling Eurobond from FFI

By John Evans

WITH MOST sectors of the international bond markets under varying degrees of pressure, market attention swung yesterday to the Eurosterling market where Finance for Industry is launching a £10m issue.

The 12-year offering, with a 13 per cent coupon and priced at par, is clearly aimed at tapping the growing foreign demand for British fixed-interest securities which has resulted in dramatic gains in gilt-edged stocks in the past weeks.

Sinking fund provisions provide for an average life for the bonds of nine years.

The bonds will be fully placed with a management group led by S. G. Warburg. The issue will then be offered to a selling group, with the managers able to reduce commitments to 50 per cent of the total amount. Selling group concessions amount to a standard 1½ per cent.

The latest bond is thus pitched on terms which give a yield, depending on re-allowances available in excess of returns available on most outstanding Eurosterling issues. At the same time, yields on comparable longer-term domestic gilt-edged are generally around 13 per cent.

In other markets, the Korea Development Bank is raising a 12m Kuwaiti dinar bond, due 1988 through the National Bank of Kuwait and Merrill Lynch International.

The coupon is 7¾ per cent, with an indicated pricing of par or a small discount.

In a subdued Deutsche-mark sector, Dresdner Bank said that the DM 100m five-year bond for Nippon Kokan KK now carries a 6¼ per cent indicated coupon instead of the expected 6½ per cent. Pricing is indicated at par.

In Switzerland, a SwFr 60m five-year private placement has been arranged for the Electricity Supply Commission of South Africa. The issue, with a coupon of 5¼ per cent at par, has been managed by Credit Suisse.

Final terms for Sweden's SwFr 200m private placement due 1986, comprises a 3 per cent coupon ad pricing at par. Swiss Bank Corporation was the lead manager.

The Eurodollar bond market was quiet in featureless trading yesterday.

FT INTERNATIONAL BOND SERVICE

The list shows the 200 latest international bond issues for which an adequate secondary market exists. For further details of these or other bonds see the complete list of Eurobond prices published the second Monday of each month.

Closing prices on February 27

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
a Akt. 9¼ 88	25	94	94½	0	−0¼	10.22
ECA 8¾ 87	50	93¾	93¾	−0¼	−0¼	9.92
ECA 9¾ 84-99	50	95¾	96¾	0	−0¼	9.94
T 9 83	75	94¾	94¾	0	0	9.74
anada 9 83	400	97¾	98¼	+0⅛	+0⅛	9.77
anada 9¾ 98	350	96¾	96¾	+0¼	−0¾	9.94
anadair 8½ 83	70	94¼	94¾	0	−0¼	10.18
ominion Bridge 9 85	25	93¾	94¾	−0¾	−0¼	10.19
B 9¾ 98	125	93¾	93¾	0	−1¼	10.12
xport Dv. Cpn. 9.85 84	150	99⅛	100⅛	−0⅛	−0¼	10.05
xportfinans 9 86	50	95	95½	−0¾	−0¼	9.90
inland 8¾ 83	100	95¾	96⅛	−0⅛	−0¾	10.19
inland 9 88	100	94⅛	95¼	0	−0¾	10.10
inland 9½ 86	100	96⅞	97⅛	0	−0¼	10.08
E Fin. 9½ 84	50	97¾	97¾	−0⅛	−0¾	10.16
ould Int. Fin. 9¾ 85	50	99¾	99¾	+1¾	+1¾	9.96
ospital O/S 9 83	25	96¼	96¾	−0¼	−0¾	9.96
udson Bay Co. 10 84	50	99¾	99⅞	−0⅛	−0¾	10.05
al Finance 9¾ 90	30	93½	94	+0¼	+0¼	10.70
.C. Penney 8½ 83	100	96¾	96¾	+0⅛	−0¾	9.81
anitoba 9½ 89	75	96¾	96¾	−0¼	−0¾	10.09
Z Dev. Fin. 8¾ 83	20	93¾	93¾	+0¾	−0½	10.05
Z Dev. Fin. 8¾ 85	20	92⅞	93¾	+0¾	−0¾	9.88
at. West. 9 86	75	96¾	96¾	+0¾	−0¾	9.67
ew Brunswick 9¾ 84	75	97	97½	+0¼	+0¾	10.11
ewfoundland 9¾ 90	50	98½	99	+0¼	−0¼	9.88
ord. Inv. Bk. 8¾ 86	25	94¼	94¾	−0½	−0¼	9.67
orsk Hydro 9⅛ 94	50	94½	95¼	0	−0¾	9.92
orway 7¾ 83	250	92¾	93¾	0	−0¾	10.03
orway 8¾ 83	150	96	96½	0	−0¾	10.07
orway 9¾ 84	150	99¾	100¾	0	−0¾	9.98
nt. Hydro 8½ 85	125	93¼	93¾	+0¼	−0¾	9.96
uebec Hydro 9½ 93	50	96¾	98¾	0	−0¾	9.97
edland XW 9½ 91	25	*93½	94	0	0	10.43
ears Roebuck 9 82	150	97¾	97¾	0	0	10.01
weden 9¾ 98	125	94¾	94⅞	−0¼	−0¼	10.12
K 8½ 85	200	95	95½	+0¼	−0¾	9.76
K 8⅞ 93	150	93½	94¼	+0¼	−0¾	9.81

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
merican Ex. Int. 5½ 87	70	96½	97¼	−0¼	−0¾	6.01
rgentina 6½ 88	150	95	95½	−0¾	−0¾	7.19
ustralia 6 88	250	99¾	99⅞	−0¾	−0¾	6.05
ustria 5¾ 90	150	91½	92	0	−0¾	6.79
inkamerica 5¾ 90	150	98	98½	−0¾	0	5.96
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Asian Dev. Bk. 5¾ 88	15	89¾	90¼	+0¼	−2¼	7.19
Australia 5.6 83	30	99¾	100¼	−0¾	−0¾	5.77
Australia 6½ 88	20	95¼	96	−0¾	−1	7.26
BFCE 6.4 90	30	†91¼	92¾	−2¼	−2¼	7.59
Eurofima 6.3 90	10	†93¼	93¾	−0¾	−0¾	7.28
Finland 5.6 83	10	97¾	98¾	0	−0¾	6.14
Finland 6.8 88	10	95¾	96¾	−0¾	−0¾	7.61

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Rank O/S Hold. 11½ AS	12	†94¾	95¾	+0¾	0	13.03
Auto Cote B. 7 93 EUA	16	91¾	93	+0¾	+0¾	7.50
Komm. Inst. 7½ 93 EUA	15	97¾	98	+1½	+0¾	7.70
Pavoma 8¾ 93 EUA	20	94¾	95½	+0¾	+0¾	8.86
SDR France 7 93 EUA	22	94¾	95½	+0¾	+1¼	7.84
Algemene Bk. 6¾ 83 Fl	75	96	96¾	+0¾	0	7.38
Brazil 7½ 83 Fl	75	94½	95½	+0½	−0¾	8.90
CFE Mexico 7½ 83 Fl	75	97¾	98¼	0	−0¾	[illegible]
EIB 7¾ 85 Fl	75	94¾	95	+0½	−0½	8.33
Neder. Midd. 6½ 83 Fl	75	93¾	94¾	−0¼	0	8.14
New Zealand 6¾ 84 Fl	75	93¾	94¾	−0¾	−0¾	8.10
Norway 6½ 83 Fl	100	93½	94¾	−0¾	−0¾	8.32
Elf Aquitaine 9¾ 88 FFr	150	99¾	99¾	0	−0¾	9.84
EIB 9¾ 88 FFr	200	99¾	99⅞	0	−0¾	9.78
Norway 9¾ 84 FFr	200	99¾	100¾	+0¾	+0¾	9.28
PSA Peugeot 9¾ 87 FFr	175	99¾	99¾	−0¾	−0¾	9.81
Unilever 10 85 FFr	100	101½	102¾	+0¾	0	9.59
BAT 8 88 LuxFr	250	97¾	99¾	+0½	+0¾	8.34
Bayer Lux. 8 86 LuxFr	250	97¼	98¾	+0¾	0	8.38
EIB 7¾ 88 LuxFr	250	96¾	97⅞	+0¾	+0¾	8.17
Finland I. F. 8 88 LuxFr	250	97	98¼	+0¾	+0¾	8.37
Norway 7¾ 83 LuxFr	250	97	98¼	+0¾	+0¾	8.39
Norges Km. 8 86 LuxFr	500	99½	100	+0¾	+0¾	8.10
Renault 7¾ 88 LuxFr	500	96¾	97¾	+0¾	0	8.21
Solvay Fin. 8 88 LuxFr	500	100¾	101¾	+0¾	0	7.84
Swedish Bk. 8 88 LuxFr	500	99⅞	100¾	+0½	+0¾	8.07

FLOATING RATE NOTES	Spread	Bid	Offer	C.dte	C.cpn	C.yld
Arab Intl. Bk. M5.5 83	0¾	96	96½	31/7	11.44	11.35
BFG Fin. Co. M5.5 89	0¾	98¾	99¾	12/7	12.4	12.59
Bco. El Salvador M8 83	1¾	97½	98	12/4	11.31	11.57
Bco. Nac. Argnt. M8 83	0¾	99¾	99¾	21/7	12¾	12.33
Bank of Tokyo M5¾ 93	0¾	97¾	97¾	18/4	10½	10.77
Banque Worms M5¾ 85	0¾	98¾	99¾	15/6	12	12.20
Bq. E. d'Alg. M8.375 84	0¾	96¾	97	9/8	11⅞	12.29
Bq. E. d'Alg. M7.5 85	0¾	96¾	96⅞	2/5	12¾	13.36
Bq. Indo et Suez M5½	0¾	98¾	99¾	25/7	12	12.12
Bq. I. Af. Occ. M6.5 83	0¾	97¾	98¾	12/7	12.4	12.67
CCCE M5.25 98	0¾	97¾	97¾	3/8	11⅞	11.65
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.73	11.98
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CONVERTIBLE BONDS	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

* No information available—previous day's price.

† Only one market maker supplied a price.

Straight Bonds: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week=Change over price a week earlier.

Floating Rate Notes: Denominated in dollars unless otherwise indicated. M=Minimum coupon. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate for U.S. dollars. C.cpn=The current coupon. C.yld=The current yield.

Convertible bonds: Denominated in dollars unless otherwise indicated. Chg. day=Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

AMERICAN QUARTERLIES

BANK OF NOVA SCOTIA		
First quarter	1979 C$	1978 C$
Revenue	718.3m	476.1m
Net profits	43.82m	34.56m
Net per share	1.06	0.84

FOSTER WHEELER		
Fourth quarter	1978 $	1977 $
Revenue	421.1m	329.8m
Net profits	11.31m	7.23m
Net per share	1.37	0.89
Year		
Revenue	1.49bn	1.19bn
Net profits	41.12m	27.06m
Net per share	5.01	3.22

GENERAL CABLE CORPORATION		
Fourth quarter	1978 $	1977 $
Revenue	245.5m	155.5m
Net profits	†563,000	2.77m
Net per share	†0.19	0.16
Year		
Revenue	849.0m	620.5m
Net profits	25.35m	20.30m
Net per share	1.63	1.37

† Loss

HARNISCHFEGER CORPORATION		
First quarter	1979 $	1978 $
Net profits	†2.59m	4.84m
Net per share	†0.29	0.55

† Loss

HOME OIL		
Year	1978 $	1977 $
Revenue	204.7m	—
Net profits	[illegible]	38.3m
Net per share	4.46	4.69

KELLOGG		
Fourth quarter	1978 $	1977 $
Revenue	426.2m	370.4m
Net profits	25.1m	22.5m
Net per share	0.33	0.29
Year		
Revenue	1.69bn	1.53bn
Net profits	145.1m	138.2m
Net per share	1.90	1.81

PETRIE STORES		
Fourth quarter	1978 $	1977 $
Revenue	141.2m	120.9m
Net profits	16.01m	14.04m
Net per share	1.14	1.00
Year		
Revenue	435.9m	387.8m
Net profits	48.21m	41.51m
Net per share	3.43	2.95

PETROFINA CANADA		
Year	1978 C$	1977 C$
Revenue	594.0m	531.0m
Net profits	33.7m	30.7m
Net per share	2.37	3.07

RANGER OIL CANADA		
Year	1978 C$	1977 C$
Revenue	10.4m	9.5m
Net profits	2.30m	3.42m
Net per share	0.27	0.40

REXNORD INCORPORATED		
First quarter	1979 $	1978 $
Revenue	220.0m	189.9m
Net profits	11.27m	9.72m
Net per share	0.88	0.88

ZENITH RADIO		
Fourth quarter	1978 $	1977 $
Revenue	278.6m	262.4m
Net profits	[illegible]	[illegible]
Net per share	0.34	0.8
Year		
Revenue	981.2m	955.6m
Net profits	23.4m	7.6m
Net per share	1.24	0.40

Akzo climbs out of the red

BY CHARLES BATCHELOR IN AMSTERDAM

AKZO, the Dutch chemicals and fibres group, has achieved its goal of "a very modest profit" for 1978 but proposes not to pay a dividend for the fourth year in succession.

Last year's improvement—net profits of Fl 24m against losses of Fl 166m—came almost entirely from companies outside the Netherlands and the results of most of its domestic operations remain a matter of great concern, it said in a provisional statement.

Akzo, which has undertaken a severe cutback of its loss-making fibres division in the past few years, reports the net profit after extraordinary items. Sales were Fl 10.66bn ($5.33bn) compared with Fl 10.43bn. It will ask shareholders to approve the passing of a dividend and the payment of the small profit into reserves. Akzo last paid Fl 4 per share in 1974.

Isolated gains, including a Fl 11m reduction on the Fl 35m exchange loss on outstanding Swiss franc borrowings at the end of the third quarter, had a favourable effect on fourth quarter earnings.

Net profit before extraordinary items in 1978 was Fl 47m compared with a Fl 52m loss the year before. Extraordinary losses, primarily from additional write-offs on property, plant and equipment and provisions for rationalisation, amounted to Fl 23m, sharply lower than the Fl 114m in 1977.

Net profit per share after extraordinary items was Fl 0.81 compared with a loss of Fl 5.63.

Sales increased by only two per cent in 1978. Excluding losses on the translation of currencies the increase would have been six per cent. Fourth quarter sales rose four per cent on the same 1977 quarter to Fl. 2.81bn. Fibre sales rose six per cent to Fl 951m chemical product sales rose one per cent to Fl 1.03bn while turnover of the remaining divisions rose five per cent to Fl 827m.

In the year as a whole fibre and chemical product sales were marginally lower at Fl 3.57bn and Fl 3.89bn respectively. Only pharmaceuticals, consumer and other products sales rose, by nine per cent to Fl 3.2bn.

The company's workforce declined by 1,200 during the year to 83,200. The fibre division, Enka, shed 1,200 jobs. Newly consolidated companies added 800 jobs, matching reductions in other companies.

Shell Nederland ahead on refining in Holland

BY OUR AMSTERDAM CORRESPONDENT

SHELL Nederland made an unexpected profit on its refinery activities in Holland in 1978 but the chemicals division chalked up a large loss.

The company had earlier reported an upturn in refining operations but said it expected this would only be temporary. These results follow a loss of Fl 300m ($150m)—spread about equally over the two divisions—the year before.

An improvement in market prices in the final quarter of the year, itself due to a number of causes, contributed to the refining divisions profitability, senior managers told a meeting of the works council. However, the problem remains that the relatively small volumes of oil traded on the Rotterdam free market and elsewhere form a disturbing influence which can determine the financial result of Shell's Dutch refining activities.

The interruption to oil deliveries from Iran and the severe winter in Western Europe created favourable conditions for the oil industry to increase its earnings. But if Shell Nederland requires more oil than it has bought under long term contracts with Shell International Trading Company it will have to pay considerably higher prices.

Theoretically the amounts contracted could be reduced but Iran has a vested interest in restarting deliveries, Shell said. Up to now the company has been able to maintain throughput at 70 per cent of capacity.

Financial prospects for the chemicals division are not particularly favourable following the large loss made in 1978, the company said. Raw material prices have risen rapidly and it is questionable whether the chemical price increases of around 20 per cent which have been announced by the industry can be carried through on a market where supply exceeds demand.

High start-up costs of new plants at Shell's Moerdijk site will also have an adverse impact on the 1979 result.

Hoechst buys Balenciaga

BY COLLEEN TOOMEY

HOECHST, the major West German chemical company, with sales of DM23.3bn, yesterday gained a stronger foothold in the highly-competitive French perfume market with the acquisition of Balenciaga S.A.

Balenviaga S.A., which sells haute couture and ready-to-wear clothes in boutiques in France, makes perfumes, sunglasses and fashion accessories, for export, yesterday agreed to sell a majority interest in its capital to Marbert S.A., a wholly owned subsidiary of Marbert GmbH of West Germany.

Marbert GmbH, which is controlled by the Hoechst AG chemical group, is one of the leading German perfume and cosmetic companies with turnover in excess of DM 59m.

Balenciaga refused to disclose financial details of the transaction.

Swiss Bank Corporation earnings decline

By John Wicks in Zurich

NET PROFIT of Swiss Bank Corporation, one of the Swiss "big three," fell by 6 per cent last year to SwFr 223m, leaving cash-flow lower by 4 per cent at SwFr 369m.

Despite the decline in earnings, which managing director Dr. Franz Schmitz said in Basle yesterday was "not wholly unexpected," he board is to recommend an unchanged dividend of 10 per cent on increased capital.

The decline in profits was attributed by Dr. Schmitz to the economic situation and interest rate development in Switzerland, restrictions imposed by the Swiss authorities during 1978 on bank operations and conditions on international finance and currency markets.

There was a marked fall in income of SwFr 48.34m to SwFr 124.94m, in securities earnings. In contrast, profits on foreign-currency and precious metals trading jumped by SwFr 65.1m to SwFr 239.6m. The bank points to the high turnover volumes in both foreign exchange and precious metals.

With regard to interest income, the net figure—the difference between interest received and interest paid—showed a slight decrease from SwFr 347.4m to SwFr 338.5m, while net earnings from commissions remained almost unchanged at SwFr 374.5m. Elsewhere, income from bills and money-market paper was up slightly at SwFr 118.8m against SwFr 116.3m and income from participations rose from SwFr 32.5m to SwFr 33.96m.

Balance sheet total went up by SwFr 7.53bn in 1978 to SwFr 63.24bn, a rise of 13 per cent. The due-to-banks sum rose within the liabilities figure by SwFr 2.93bn to SwFr 22.24bn and that of clients' funds by SwFr 3.21bn to SwFr 33.58bn.

Despite heavy competition and the negative effects of the currency situation on Swiss business, outstanding domestic loans rose by what Dr. Schmitz called a remarkable 14.5 per cent within this figure. A simultaneous 12.4 per cent increase in loans to foreign clients concerned primarily the activities of branches abroad.

In the past year, SBC has experienced substantial growth in the sector of banking subsidiaries, said Dr. Schmitz. The company acquired a stake in the Geneva private bank Ferrier Lullin + Cie SA and took over the personal-loan specialist bank Procredit SA.

Apart from the integration during 1978 of the small Banque Commerciale de Sion, SBC last Friday effected the absorption—subject to final approval—of the regional bank Handwerkerbank Basle, which it had already undertaken to support when financial difficulties became known last year.

The bank also announced the issue of a SwFr 200m bond. The loan will carry a coupon of 3 per cent and be priced at par.

Weak home performance hampers Saint-Gobain

BY TERRY DODSWORTH IN PARIS

THE RE-ORGANISATION set in train last year at France's largest quoted company, Saint-Gobain-Pont-a-Mousson, failed to pull the group out of its deteriorating financial performance on its home market.

In total, French operations lost money, dragging down the overall performance of the glassmaking-to-engineering group to a net profit of FFr 450m ($104.7m), compared with FFr 642m in 1977.

M. Roger Martin, the group chairman, put the main blame for this lack-lustre performance last year on Government price-controls. He welcomed the fact that these restrictions were now being dismantled, but emphasised that it would require some time for the beneficial results of the new regime to work through.

In his annual message to the work force, accompanying the provisional figures, M. Martin indicated that Saint-Gobain was looking for new areas of business. Meanwhile, however, it was concerned with two principal problems, the scope for growth for its large-scale activities and the low level of profitability.

The problems encountered in France are illustrated by the fact that the cash-flow fell by 11 per cent, compared with 1977, to a total of FFr 2.1bn, of which only FFr 230m was realised in the home market itself. This was half the total of the previous year, and for the first time cash-flow in France (11 per cent) fell below the level of that generated in West Germany (20 per cent) and the U.S. (14 per cent).

Consolidated group sales were up by 8 per cent to FFr 34.3bn,

	1978	1977
	FFrm	FFrm
Net sales	34,300	31,829
Gross profit ...	4,060	4,119
Net profit	450	642
Cash-flow	2,100	2,382
Investments ...	2,800	2,495

divided equally between France and external markets, with exports moving up by 12 per cent to FFr 3.4m. Gross profits amounted to FFr 4.0bn, against FFr 4.1bn.

Following the re-organisation move last year, Saint-Gobain has split down its divisional structure into ten units rather than six, each responsible for a main manufacturing area. In order of importance, these now comprise flat glass (16 per cent); fibres (14 per cent); packaging (ten per cent); asbestos cement and wood (10 per cent); piping (nine per cent); paper (seven per cent); engineering (five per cent); insulation materials (three per cent); general business (13 per cent); and trading (11 per cent).

M. Martin commented that the basic finances of the company remained sound. Investment last year, stretching over a total of ten countries, went up to FFr 2.8bn, compared with FFr 2.5bn in 1977. This was covered either by cash flow (FFr 2.1bn) or by money raised disinvestments (FFr 710m).

In the investment programme, the French interests benefited from a policy of disproportionate support, attracting FFr 780m last year, some three times the rate of the cash flow generated by the domestic operations.

But at the same time the French companies have been affected more by the productivity drive going on in the group, losing 1,830 workers through redundancy programmes during the year to reach their present total of 7,770 employees. The total group work-force now amounts to 157,900.

Austrian group to acquire Zanussi shareholding

BY RUPERT CORNWELL IN ROME

VOEST ALPINE, the Linz-based group controlled by the Austrian State, is to take a 10 per cent shareholding in Industrie Zanussi Spa, Italy's largest electrical and domestic appliance manufacturer.

The deal will go through as part of a Zanussi capital increase later this year. It comes only a few months after the Italian group bought back a 20 per cent stake in its own capital which AEG Telefunken of West Germany was forced to give up as a result of its own persisting difficulties.

Details of the operations have not yet been finalised. However, a Zanussi spokesman last night indicated that the plan broadly called for a capital increase from the present L37.3bn to L80bn ($96m), partly by the distribution of free shares and partly by a paid issue.

The Austrian group has consolidated sales of Schillings 48bn ($3.7bn), and with 80,000 people on its payroll is the country's largest industrial concern, engaged in the metals and civil engineering sectors.

Paul Lendvai writes from Vienna: Voest-Alpine has world wide interests. It has invested in U.S. coal mines, in iron ore mines in the Phillipines and in engineering concerns in West Germany. The shareholding in Zanussi is part of the diversification of Voest. Zanussi is said to possess valuable know-how in the industrial construction sector, particularly with regard to the building of complete plants for household appliances.

Daimler-Benz lifts production

By Roger Boyes in Bonn

DAIMLER-BENZ, the West German motor manufacturer, plans to step up its car production in 1979 to the record level of 420,000 units. The increase, announced by Herr [illegible] Schmidt, a member of the group's board, should go some way towards easing the substantial delays on deliveries of Mercedes cars.

The announcement indicates that the group's car production plans are back on course. Daimler-Benz intends to bring motor car production up to 450,000 units a year by the end of 1982 but last year, because of the long strike in the Baden-Wuerttemberg engineering industry, unit production totalled only 393,200. This compared to 401,255 units in 1977.

Herr Schmidt, in a statement coinciding with the opening of the Geneva motor show, predicted that this year would be a good one for the motor industry.

An example of this, he said, was the market for four wheel drive cross-country vehicles. This appeared to be expanding at an annual rate of between 5 per cent and 10 per cent.

The group's co-operation with Steyr-Daimler-Puch of Austria in producing the Puch "G" Cross-Country car was beginning to pay off and the Graz factory would produce 11,000 of these vehicles to help meet the expanding demand.

Nordic Bank increases operating profit by 51%

BY JOHN EVANS

NORDIC BANK, the London-based multinational bank, reports that operating profits rose by 51 per cent in 1978 to £4.7m against the 1977 level of £3.1m.

Nordic increased its shareholding in Nordfinanz-Bank Zurich to 60 per cent from 6.15 per cent at end-1978. However, the bank's 1978 profits do not reflect any earnings from the related increase in share capital.

Total capital funds advanced to £96.6m from £31.8m and total assets to £1.07bn from £458m, reflecting the consolidation with Nordfinanz.

Nordic said its international business, based on London, Singapore and Hong Kong, expanded last year. The loan portfolio, excluding Nordfinanz's operations, grew to £358m from £298m and total deposits, on the same basis, to £557m from £416m.

SWISS CAPITAL MARKET

Upsurge in foreign demand

BY FRANCIS GHILES

RECEDING FEARS of further appreciation of the Swiss franc and the low interest rates available for good quality borrowers have resulted in a resurgence of foreign demand on the Swiss capital markets.

Canada is currently arranging a financial package amounting to SwFr 1.5bn, one of the largest ever for a foreign Government in this market while Australia is raising SwFr750m.

Meanwhile the Japanese Ministry of Finance has allowed 52 Japanese corporations to float external bonds worth about $1.6bn in the second quarter of the current year. The lion's share is expected to be in the form of Swiss Franc denominated private placements, 35 of which will be convertible, the balance straight bonds. Swiss Franc denominated issues will account for an equivalent of $1.12bn of the total.

The financial package being arranged for Canada is split in three equal tranches, all managed by Union Bank of Switzerland. The private placement carries a coupon of 3 per cent for six years while terms for the bonds which will be offered early next month and the credit are not yet known.

Australia's package is also split in three equal tranches: a private placement with a coupon of 3½ per cent for seven years through Credit Suisse and a six-year loan with a fixed interest rate of 3¼ per cent for five years through Union Bank of Switzerland. The public bond offering being arranged by SBC will be open for subscriptions early next month.

Of the 52 external bond issues the Japanese plan in the next quarter, 40 are expected to be denominated in Swiss Franc and to be in the form of private placements. They include such well known names as Nissan Motor and Mitsubishi Electric.

The deterioration of the West German capital market in recent weeks has already led to the cancellation of issues for Honda Motor and Sankyo Electric. Both firms are now discussing arranging bonds on the Swiss Franc market and Honda Motor for SwFr 100m through UBS. Meanwhile Rhythm Watch has decided to cancel its planned Deutsche-Mark issue while Aoki Construction is understood to be thinking along the same lines.

Japanese corporate borrowers can raise Swiss franc denominated bonds with coupons two basis points below what they have to pay on equivalent Deutsche Mark denominated ones at present. The latest Japanese convertible on the DM market is for Chujitsuya Company, and carries a coupon of 4¾ per cent. The expected coupon on the Honda Motor Swiss franc bond is 2¾ per cent.

● John Wicks adds from Zurich: as yet it is not yet clear on what conditions the Japanese notes will be offered. Most observers anticipate a rise in Swiss coupons in the foreseeable future. It seems unlikely that the "Trudeau bond" interest rate of 3¼ per cent for the private placement tranche of that issue will set the tone for the next quarter's Japanese placements. The same probably goes for the 3¾ per cent coupon on a new Mitsubishi notes issue which according to banking circles appears to be on the low side for current demand.

There is also some doubt as to whether the National Bank will approve the numerous Japanese issues now announced. Earlier this week a National Bank spokesman said it was too early to comment.

Dr. Franz Schmitz, managing director of the Swiss Bank Corporation, said in Basle yesterday that last year Japanese notes had been snapped up by investors in view of the shortage of paper on the Swiss market. Japanese borrowers had in 1978 been the biggest single group on the country's private-placement market. He expressed doubts, however, whether "very large volume" of new Japanese Swiss franc notes would be placed within the time foreseen. The reception of the notes would depend on the overall condition of the market.

SWISS FRANC BONDS TO BE ISSUED BY JAPANESE COMPANIES IN 2ND QUARTER 1979

Name	Type	Amount (mil.)	Jap. Broker	Name	Type	Amount (mil.)	Jap. Broker
Tsubakimoto Chain	S/B	25	Nomura	Fujiya Confec.	C/B	30	Nikko
Sekisui Prefab	C/B	100	Daiwa, Yamaichi	Kubota	C/B	60	
Okumurasumi	C/B	50	Daiwa	Nippon Jutaku Fin.	S/B	20	Nikko
Mitsubishi Ele.	C/B	80	Daiwa	Gunei Chem.	C/B	20	Daiwa
Tobishima Const.	C/B	40	Daiwa	Fujitsu	C/B	80	—
Kyoritsu	C/B	20	Nomura	Nippon Shimpan	C/B	30	Nikko
Tokyu Depart.	C/B	50	Nomura	Sumitomo Cement	C/B	50	Nomura
Onoda Cement	S/B	30	Nikko	Mitsukoshi	C/B	40	Nomura, Sum.
Kyowa Hakko	C/B	30	Yamaichi	Ricoh	C/B	35	Nomura, Sum.
Sekisui Chemical	C/B	65	Yamaichi	Taiyo Yuden	C/B	70	Nomura, Sum.
Aho	C/B	150	Nikko, Daiwa	Ryobi Mfg.	C/B	20	Daiwa
Mitsui Oak	S/B	70	Daiwa	Nihon Radiator	C/B	30	Yamaichi
Kao Soap	C/B	30	Daiwa, Yamaichi	Dainippin Ink	C/B	70	Yamaichi
Japan Aviation Ele.	C/B	20	Daiwa	Asics	C/B	25	Yamaichi
Odakyu Railway	C/B	50	Nikko	Tokyu Hotel Chain	C/B	30	Yamaichi
Clarion	C/B	60	Nomura	Fuji Oil	S/B	40	Yamaichi
Uny	C/B	50	Nomura	Makino Milling	C/B	25	—
Nissan Motor	C/B	100	Nikko	Kokudo Kaihatsu	C/B	25	Daiwa
Dai'ei	C/B	100	Daiwa	Nichimo	C/B	25	Nikko
Murata	C/B	60	Nomura				
Syowa Densen	C/B	30	Daiwa				

BUILDING SOCIETY INTEREST RATES

GREENWICH
(01-858 8212)

281 Greenwich High Road,
Greenwich SE10 8NL

Deposit Rate 6.45%. Share Accounts 8.10%, Sub'pn. Shares 9.25%. Interest paid quarterly on shares/term shares. Monthly Income Shares 8.10%.

LONDON GOLDHAWK
(01-995 8321)

15/17 Chiswick High Road,
London W4 2NG

Sub'pn. Shares 9.75%*. Deposit Rate 7.75%.

Share Accounts 8.50%*. 3-mnths. notice 9.00%*.

Term Shares 9.50%*, 3 yrs.; 9.25%*, 2 yrs.; 9.00%, 1 yr.

* Includes 0.25% Centenary Bonus throughout 1979.

CLIVE INVESTMENTS LIMITED
1 Royal Exchange Ave., London EC3V 3LU. Tel.: 01-283 1101
Index Guide as at February 20, 1979 (Base 100 on 14.1.77)

Clive Fixed Interest Capital	131.30
Clive Fixed Interest Income	110.47xd

ALLEN HARVEY & ROSS INVESTMENT MANAGEMENT LTD.
45 Cornhill, London, EC3V 3PB. Tel.: 01-623 6314.
Index Guide as at February 22, 1979

Capital Fixed Interest Portfolio	101.94
Income Fixed Interest Portfolio	100.56

INTL. COMPANIES and FINANCE

HONGKONG AND SHANGHAI BANK

Profits increase surpasses forecast

BY HUGH PEYMAN IN HONG KONG

HE HONGKONG and Shanghai Banking Corporation surprised even the most optimistic ical forecasters yesterday—one ay ahead of today's Hong Kong udget, which many fear will deflationary—by announcing unaudited 1978 net group ofit increase of 39 per cent approximately HK$727m S$151.45m) from HK$522m 1977. The profit of the bank, cluding dividends from subiaries, rose 38 per cent to S$592.4m from HK$428.4m.

The Colony's leading bank, idely regarded as the unicial central bank, also prosed a one-for-two bonus issue a 13 cent final dividend rise 80 cents, making an annual tal of 80 cents, against 65 nts in 1977, on capital raised by a one-for-10 bonus issue.

The bank will recommend at an April 20 extraordinary meeting that authorised capital be increased to HK$2bn from HK$1.25bn. This capital autherisation increase is presumably associated with the merger with Marine Midland Banks of Buffalo, New York, which has already received shareholder approval.

Most analysts expected profits of between HK$ 660m and HK$ 670m at the best, and a one-for-four bonus issue. These much better than looked for results may arise partly from the need for fuller disclosure required by U.S. banking regulations with which the bank will have to comply.

The bank proposes to add HK$ 100m to its published reserves of HK$ 1.43bn, which after dividends will leave HK$ 122.8m to be added to undistributed profit.

Monetary growth is described by the bank as "excessive" during 1978 in major trading countries, and there was a trend towards higher interest rates in the U.S., UK and Hong Kong in the latter part of the year. No immediate reduction is foreseen by the bank in the generally high inflation rates and in view of this and an expected slow down in growth of major economies, the bank does not think 1979 profits will rise as much as in 1978. However the total distribution is likely at least to match the 1978 level, of 54 cents per share on the proposed increased capital.

These results round off a very successful set of figures for the Hong Kong banking sector.

* * *

THE HONG KONG and Yaumati Ferry Co. raised its consolidated net profit 46 per cent to HK$16.1m in 1978 from HK$11.02m in the previous year. Final dividend was raised 10 cents to 80 cents for an annual total of HK$1.20, a 10 cent gain over 1977.

The ferry company started a hover-ferry service last November to the Chinese port of Canton. It plans to expand the service later this year with the introduction of night services in addition to the three daily runs on the 65-mile Hong Kong-to-Canton route.

Howard Smith advances to record

By James Forth in Sydney

OWARD SMITH, the shipping, gineering, coal and sugar oup, lifted its profit almost per cent, from A$11.53m to record A$14.05m (U.S.$16m) 1978. The result would have en higher but for industrial ouble in mid-year which sulted in substantial lost proction for the engineering bsidiary, A. Goninan.

Group turnover rose 6.7 per nt. from A$87m to A$93m (US$106m). The dividend is ld at 20 cents a share, with final payment of 15 cents. It ll be paid on capital increased a one-for-three scrip issue. e result equals earnings of .7 cents a share, compared 34.7 cents in 1977-78.

* * *

E DIVERSIFIED scrap metal rchant, Sims Consolidated, ged a strong recovery in the cember half-year, converting A$1.53m loss in the same preus period to a profit of .15m (US$2.4m). A recovery been forecast because of stantial increases in the price scrap metal over recent nths.

ko-Wallsend, the mining industrial group, recently ounced a A$82m takeover for Sims, which has the king of the Sims Board. directors have declared an rim dividend of 2.5 cents, h can be retained by shareers accepting the Peko offer.

Earnings growth at Bank Leumi

BY L. DANIEL IN TEL AVIV

BANK LEUMI — Israel's oldest and biggest bank and one of the world's top 100—raised its net profit by 33 per cent to I£719m ($41m) in 1978. Operating income increased 54 per cent to I£2.3bn, and extraordinary income 43 per cent to I£653m.

The cash dividend is unchanged at 16 per cent, but the bonus share distribution is increased to 38 per cent, from 33½ per cent in 1977.

Consolidated group assets expanded 63 per cent to I£247.9bn ($13bn) at end-1978. The growth includes increments resulting from changes in the exchange rate of Israeli pounds —in particular a decline of 23.6 per cent against the U.S. dollar and of 43 per cent against the German Mark—and from the 48.1 per cent rise in the consumer price index. Thus, the bank's rate of growth was well ahead both of the devaluation and the local rate of inflation.

The growth in profits at a rate lower than the expansion of activity resulted from a number of factors:—

● The company's policy of continuing to extend loans to customers, despite the prevailing credit squeeze, which deficits and thereby an increase in the payment of liquidity fines, which range upward of 60 per cent and cost the bank I£350m;

● The policy of keeping interest and commission rates below the rate of inflation;

● Investment of I£500m new installation and services and the expansion of its international operations.

The broadening of the bank's international base is currently one of the main concerns of the group. Its four overseas subsidiaries with a total of 20 branches, and its securities investment and trading corporation account for 15 per cent of the consolidated balance sheet. This expansion will continue this year, with the fourth branch to be opened in London and the tenth and eleventh branches in the U.S. and a banking subsidiary in Uruguay.

Overseas activity has been facilitated by the Israeli Government's liberalisation of foreign currency regulations towards the end of 1977. The liberalisation enabled Israeli residents to obtain loans in foreign currency and to diversify their savings portfolios with foreign currency investments. As a result, two-thirds of the entire balance sheet represent operations in foreign currency—in Israel and by the overseas subsidiaries.

SAAN ahead in difficult year

BY JIM JONES IN JOHANNESBURG

DURING 1978, the first year of commercial television in South Africa, South African Associated Newspapers (SAAN) reported a marginal operating profit increase to R3.33m ($3.92m). This was achieved in a year when most of the independent English language newspapers suffered circulation downturns.

Less advertising space was sold than in 1977, though revenue which might otherwise have been lost was partly offset by higher-rated tariffs and the revenue decline was more than compensated for by higher cover prices and a gain in circulation revenue.

At present South African newspapers are plagued by fast increasing newsprint prices with, this year, the full effects of the latest 12 per cent rise to be felt. However SAAN avoided the full rigours last year. With lower advertising volumes and lower circulations, newsprint savings were substantial.

Management is taking a cautious approach to prospects for 1979 with trading conditions expected to become increasingly difficult. Labour and fuel cost increases will raise distribution costs while, unless circulations fall further, which would eat into advertising revenue, the possibility of making further savings in newsprint costs is remote.

On this basis, management has been conservative in its dividend distribution policy, with earnings per share of 125 cents (1977: 142 cents) unchanged total dividends of 53 cents have been paid. Ahead of the results the shares rose 10 cents to 410 cents.

● Pre-tax profits of R7m compared with R12m for six months ended December 31 were recorded by the shipping concern South African Marine. Earnings per share were 17.3 cents, whereas taxed profit stood at R6m (R8m).

UOB final improves by 25.7%

By H. F. Lee in Singapore

THE United Overseas Bank (UOB) group has chalked up an impressive 25.7 per cent improvement in post-tax profit for the year ended December, 1978. After providing for diminution in value of assets and allocation to contingency reserve the rise was from S$28.5m in 1977 to S$35.83m (US$16.51m). In 1977 the increase was 15 per cent.

At the bank itself, post-tax profit went up by 22.6 per cent —against 20 per cent previously —to S$26.15m (US$12.06m).

The higher growth at group level reflects increased contribution from the group's subsidiaries, particularly Chung Khiaw Bank and Lee Wah Bank.

The proposed final gross dividend is 7½ per cent on the enlarged capital of S$175.69m. The capital was increased as a result of a one-for-ten bonus issue last May and the recent issue of 4.475m new shares to acceptors of the recent offer to Singapore Finance shareholders.

Setback for Prima

PRIMA, the major Singapore flour miller, suffered a setback in 1978 with post-tax profit declining sharply, by 39 per flour miller, suffered a setback cent to S$4.61m (U.S.$2.1m). The operating profit, however, declined less sharply, by 15 per cent to S$10.6m, writes H. F. Lee from Singapore.

Prima gave no reason for the setback, but it is apparent that the reversal was suffered in the second-half of the year. Group operating profit during the first-half rose by 14 per cent to S$7.8m, which means that the group achieved an operating profit of only S$2.8m in the second half of the year. Moreover, group taxation was 3 per cent higher, at S$5.95m in 1978, while provisions for depreciation and amortisation remained practically unchanged at S$4.6m.

Japanese chemical companies to merge

By Yoko Shibata in Tokyo

SHOWA DENKO, a leading Japanese chemical company and Showa Yuka, its diversified petrochemical company subsidiary, have agreed to merge on an equal basis on July 1. Showa Denko owns 81.7 per cent of Showa Yuka, and about 80 per cent of Showa Yuka's Y100bn annual sales is distributed through Showa Denko's sales channels.

As a result, the annual turnover of Showa Denko will increase only by Y25bn. Showa Denko, however, will benefit from the rationalisation and consolidation of its business.

Showa Denko was a major aluminium and ferroalloy producer—fields which require large amounts of energy consumption—and was hit hard by the oil crisis. It suffered deficits from 1975 to 1977. The company policy has been its production to petrochemicals, from electrode chemicals. In line with this, company has begun to strengthen and exnand Showa Yuka's petrochemical production lines. In 1977 Showa Denko pushed completion of a ethylene plant for Showa Yuka (with annual production capacity of 300,000 tons) in Oita prefecture, despite opposition from the industry as a whole.

Showa Denko separated off its loss-making aluminium refinery division and shifted it to its subsidiary Showa Light Metal Company in March last year, and plans to hive off its ferrochromium plant in Toyama shortly. As a result, petrochemical products will account for more than half of Showa Denko's annual sales. Showa Denko will join the ranks of integrated chemical companies with ethylene plants, such as Mitsubishi Chemical Industries and Sumitomo Chemical Industries.

Showa Denko yesterday announced its results for 1978. Because of the separation of its aluminium refinery division, its sales declined to Y280.9bn ($1139m) from Y372.7bn in fiscal 1977, or by 25 per cent. However, its profit performance improved as a result of its rationalisation measures to cut down loss-making lines such as the aluminium division. Its operating deficit was reduced to Y0.48bn from the previous year's Y4.6bn, and net profits of Y3.7bn, were made, whereas in 1977 there was a net deficit of Y1.9bn

New emphasis on innovation in defence research

BY DAVID FISHLOCK, Science Editor

SOME OF the best scientific brains in Britain have recently begun to meet in smallish groups to discuss topics of consuming interest to the Ministry of Defence in which there may be an opportunity of striking out in a novel direction. This is one sign of a new trend in defence thinking in Britain: to put more basic research, more freedom for innovation, back into the defence effort.

This "trawl" of British brains for fresh thinking on defence problems is the idea of Professor Ronald Mason, 48, who a year ago became the new Chief Scientific Adviser to the Ministry of Defence. Professor Mason, who carries equivalent permanent secretary rank, is a member of the Defence Council and chairman of the Defence Research and Intramural Resources Committee. He is also an authority on chemical physics — the physics of crystals — with a chair at the University of Sussex.

Defence procurement policy was the prototype for the new "hard line" in research management introduced by Lord Rothschild, head of Mr. Heath's "think tank" in the early 1970s. This is the customer/contractor relationship: "The customer says what he wants: the contractor does it (if he can); and the customer pays." It has worked well for defence with its close relationship with Britain's high-technology industry. With the possible exception of medical science, it now appears to be working well in civil sectors of science. But Professor Mason has pinpointed a weakness he believes is beginning to threaten defence.

This is the way the customer-contractor relationship works in defence. The ministry's research laboratories have been regrouped into a dozen big R and D establishments, some spread over several sites. Altogether they employ a staff of about 28,000 and spend upwards of £300m a year in-house. They report to Mr. John Charnley, as controller of research and development at the ministry in London. Most of his staff are involved in project management—"real coalface stuff," as he puts it.

Projects are usually proposed by one arm of the services, say for a new aircraft or tank. First, the proposal is analysed by the Operational Requirements Committee, which includes scientists from Professor Mason's staff. This committee questions the logic of the requirement and the feasibility of the project proposed to meet it.

If passed, the proposal comes before the Defence Equipment Policy Committee, the chairman of which is Professor Mason himself. If this committee accepts the case made for the project, it begins to crank in such factors as the economics, how development will be shared with industry, and—above all nowadays—the prospects for an international collaboration to spread the development costs over a larger number of orders. Professor Mason then reports to the Secretary for Defence.

Missing link

Several major projects have negotiated this course in the last year, among them the high-speed tank to replace the Chieftain in the late 1980s: new anti-tank weapons; the AST 403 project for a new aircraft to replace the Harrier and Jaguar; and a new "smart" torpedo, first of what should turn out to be a whole new family of precision-guided munitions. Projects of this magnitude—the torpedo, for example, could be a £800m programme — normally require Cabinet approval.

In the course of the major reorganisation of British defence R and D during the 1970s, aims of which were both to save costs on running the defence laboratories and to get tighter control of the prodigious R and D costs of new ventures, something got lost, believes Professor Mason. This was the long-range end of research: the innovative role which spawns the completely novel solution. Where Lord Rothschild was recommending that some 10 per cent of an R and D budget might be devoted to activities not associated with specific projects, in defence the truly "untargeted" research may have slipped to as little as ½ per cent — about £5m — of the R and D budget. He reckons that out of a staff of 28,000 no more than 150 are engaged on research that can truly be called innovative. "Just to double this could be very significant."

Underlying the situation is the fact that Britain is spending a significantly smaller proportion of its defence budget on R and D than some other countries. The USSR is believed to be spending 22-23 per cent on R and D, the U.S. about 17 per cent, and France about 15 per cent. But Britain spends only about 13-14 per cent.

Professor Mason's defence science seminars are just a start towards restoring some priority to innovations. They are groups of about 50, mostly academics but with some directors of industrial research, and all very informal. The ministry provides them with a state-of-the-art paper to launch the discussion. The ministry is being "fairly light-handed" about the Official Secrets Act, applying it strictly to the topic under discussion.

Plans for further defence science seminars are being laid for such topics as artificial intelligence, where such technologies as the microprocessor are bringing close the prospect of warheads smart enough to choose and find their own way to the target. Space science—one of the fastest-growing sectors of science—is another, with possibilities unfolding for dogfights between satellites and spacecraft, for example, and new kinds of weapons such as laser weapons which take advantage of the emptiness of space. A third is the relationship between man and machine.

The whole area of "electronic warfare," tied up closely with electronic counter-measures—such as jamming the enemy's radars — and counter-counter-measures, presents a major and constant challenge, commanding all the intellectual resources the Ministry can muster. The bio-sciences also present a new challenge. The science itself is developing rapidly. But there is public revulsion at the idea of spreading disease as a weapon of war. The Ministry of Defence recently closed its Microbioligical Research Establishment at Porton and, as MPs were told last month, is transferring some of its "watchdog" work to the Chemical Defence Establishment next door. Today Britain is mainly dependent on a pact with the U.S. for research in this area.

Guests at the defence science seminars so far have been drawn only from Britain. But Professor Mason is already looking farther afield. With Sir Sam Edwards, of the University of Cambridge, chairman of the long-established Defence Scientific Advisory Council, he has been investigating the possibility of drawing upon expertise in Holland. They are excited by work on artificial intelligence and human factors engineering at the Dutch Government's TNO laboratories.

According to Dr. Charnley, the evidence from the two seminars staged so far is that British defence research has not slipped behind yet in its ideas. "But the innovative function is in need of some repair." He admits that there are examples of weapons systems which have been committed to production before the research and development was fully worked out.

Talent fears

What worries both of these scientists, however, is that the high priority given during the 1970s to project management may have discouraged many bright youngsters from entering this arm of the scientific civil service. Both are convinced they are failing to attract their "fair share."

The innovative end of research has therefore received a boost in the latest defence estimates. Most of the £1.15bn allocated for 1979-80 will still be spent on the development of specific weapons systems, with four-fifths of it spent in industry's research centres and one-fifth in the ministry's establishments. But about £150m will be committed to research unconfined to a specific project but concerned more broadly with the problems of, say, developing a new generation of smart torpedoes or guided bombs.

Beyond this, they will be making every effort to steer more money into the universities. As Professor Mason sees it, part of the weakness in exploiting innovation in Britain—pointed up so vividly by a recent paper from the Cabinet Office—lies in a poor interface between industry and the universities. He cites systems engineering, basic to much new product development nowadays, as one example of a discipline which universities are neglecting. With increasing help from the defence R and D budget he will be trying to bridge that gap.

Companies and Markets

CURRENCIES, MONEY and GOLD

Sterling firm: dollar improves

Sterling remained firm overall in the foreign exchange market yesterday, but eased from the best levels touched during the morning. The pound opened at $2.0265-2.0275, and touched a high point of $2.0270-2.0280 in the morning, where the Bank of England may have intervened to prevent any further rise. The scale of support for the dollar was not large, however, and the U.S. currency soon began to improve against a background of more favourable news from the Middle East. Despite Kuwait's decision to increase oil prices, hopes of renewed oil exports from Iran and the holding of oil prices by Saudi Arabia enabled the dollar to gain ground against other major currencies.

Sterling eased to a low point of $2.0205-2.0215, and closed at $2.0220-2.0230, a rise of 15 points on the day. The pound's trade-weighted index, as calculated by the Bank of England, rose to 64.3 from 64.2, the highest since March, 1978.

The dollar's trade-weighted depreciation, on Morgan Guaranty figures, narrowed to 8.2 per cent from 8.3 per cent. The dollar closed at DM 1.8510 in terms of the D-mark, compared with DM 1.8460 previously, and also improved against the Swiss franc, finishing at SwFr 1.6660, compared with SwFr 1.6617½ on Monday. A slight gain was also recorded against the Japanese yen, with the U.S. currency rising to Y201.90 from Y201.85.

PARIS—The dollar recovered against the French franc in thin trading, in the absence of any fixing on the official market, because of a strike. Speculation that Iranian oil production could reach 3m barrels a day within a month helped the dollar, which rose to FFr 4.2690 at the close from FFr 4.2537½ in early trading, and FFr 4.2625 late Monday. Sterling continued to rise, finishing at FFr 8.6330, compared with FFr 8.6160 on Monday, but the D-mark and Swiss franc were slightly weaker.

FRANKFURT — Demand for sterling continued, reflecting the attractiveness of London interest rates to foreign investors, including the West Germans, who have been buying British Government stocks recently. The pound was fixed at DM 3.7410 against the D-mark, compared with DM 3.7280 on Monday. Trading was light however, with Frankfurt trading finishing early because various European areas were celebrating the last day of the Carnival Season before the onset of Lent. The dollar eased to DM 1.8467 at the fixing, from DM 1.8485 previously, and the Bundesbank did not intervene. News that Kuwait is raising oil prices by 9 per cent was the major factor behind the dollar's decline.

MILAN—Sterling rose to a record level of L1,700.25 against the Italian lira at yesterday's fixing, an improvement of six points from the previous day, and a gain of nearly 30 points from early this month. The D-mark and Swiss franc also strengthened against the lira, but the dollar and Japanese yen lost ground. The Bank of Italy was a net seller of dollars, when the U.S. currency was fixed at L839.80, compared with L840.30 previously. The Swiss franc rose to L505.70 from L503.91, and the D-mark improved to L454.70 from L454.30.

ZURICH—Limited intervention to support the dollar was detected as the dollar came under some pressure following confirmation that Kuwait has increased oil prices by 9 per cent. The U.S. currency eased from an early rate of SwFr 1.6585 in terms of the Swiss franc, but recovered to SwFr 1.6625 by early afternoon. Sterling remained firm, helped by the prospect of higher oil prices, rising to SwFr 3.3675 by early afternoon, from SwFr 3.3650 at the previous close.

TOKYO—The dollar showed little change, closing at Y202.02½ against the yen, compared with Y202.05 on Monday. The Bank of Japan intervened in a small way to support the yen, selling an estimated $10m to $30m. The highest level touched was Y202.45 in early trading, reflecting import settlements at the end of the month, but the dollar then eased, on light selling by foreign banks and export covering by Japanese Corporations, touching a low point of $201.80.

THE POUND SPOT AND FORWARD

Feb. 27	Day's spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	2.0205-2.0280	2.0220-2.0230	0.50-0.40c pm	2.67	0.93-0.83 pm	1.74
Canada	2.4170-2.4285	2.4175-2.4185	0.60-0.50c pm	2.73	1.10-1.00 pm	1.74
Nethlnd.	4.03-4.05	4.03¾-4.04¾	2¼-1¾c pm	5.57	5-5 pm	5.44
Belgium	59.00-59.25	59.05-59.15	30-20c pm	5.08	75-65 pm	4.74
Denmark	10.39-10.44	10.41½-10.42½	2ore pm-par	1.15	½pm-1½dis	−9.60
W. Ger.	3.73-3.75½	3.74-3.75	3½-2¾pf pm	9.21	8¾-7¾ pm	8.68
Portugal	95.85-96.65	96.90-96.40	30-100c dis	−8.11	20-200 dis	−4.99
Spain	139.55-139.80	139.65-139.65	25c pm-25c dis	par	30pm-70dis	−0.57
Italy	1,698-1,702	1,698½-1,699½	2¾-½lire pm	1.23	2 pm-par	0.24
Norway	10.28½-10.30½	10.27-10.28	4½-2½ore pm	4.08	9½-7½ pm	3.21
France	8.61½-8.64½	8.63-8.64	5½-4½c pm	5.80	11-10 pm	4.86
Sweden	8.79½-8.83	8.81-8.82	3½-1½ore pm	3.40	9-7 pm	36.3
Japan	405-415	408-410	3.55-3.25y pm	9.98	9.10-8.80 pm	8.75
Austria	27.32-27.47	27.40-27.45	22-12gro pm	7.44	57-47 pm	7.58
Switz.	3.35-3.38	3.36½-3.37½	4-3c pm	12.46	10½-9½ pm	12.31

Belgium rate is for convertible francs. Financial franc 59.90-60.00. Six-month forward dollar 1.51-1.46c pm; 12-month 3.25-3.15c pm

THE DOLLAR SPOT AND FORWARD

Feb. 27	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK	2.0205-2.0280	2.0220-2.0225	0.50-0.40c pm	2.67	0.93-0.83 pm	1.74
Ireland	2.0205-2.0280	2.0220-2.0225	0.50-0.40c pm	2.87	0.93-0.83 pm	1.74
Canada†	83.38-83.55	83.51-83.54	0.30-0.10c pm	0.20	0.2dis-0.1pm	−0.07
Nethlnd.	1.9924-2.0005	1.9995-2.0005	0.57-0.52c pm	3.47	1.94-1.88 pm	3.98
Belgium	29.15-29.22½	29.20-29.22	8-7c pm	3.13	23½-22 pm	3.10
Denmark	5.1315-5.1560	5.1530-5.1545	0.25-0.75ore dis	−1.10	2-2½ dis	−1.72
W. Ger.	1.8455-1.8498	1.8488-1.8498	1.10-1.00pf pm	6.47	3.30-3.20 pm	6.96
Portugal	47.40-47.55	47.45-47.55	28-38c dis	−8.34	70-135 dis	−8.63
Spain	68.92-69.10	69.05-69.10	5-15c dis	−1.63	25-35 dis	−1.70
Italy	839.15-840.30	839.70-840.20	0.69-0.95lire dis	−1.27	2.60-3.10dis	−1.40
Norway	5.0760-5.0850	5.0800-5.0820	0.80-0.50ore pm	1.99	2.25-1.85 pm	1.85
France	4.2545-4.2725	4.2710-4.2725	1.32-1.23c pm	3.48	3.50-3.35 pm	3.24
Sweden	4.3485-4.3605	4.3585-4.3600	0.70-0.50ore pm	1.61	2.40-2.20 pm	2.20
Japan	201.70-202.30	201.80-202.00	1.33-1.23y pm	6.68	3.60-3.50 pm	6.84
Austria	13.51-13.56½	13.55½-13.56½	7.50-6.75gro pm	5.93	21-19 pm	5.79
Switz.	1.6568-1.6675	1.6665-1.6675	1.49-1.45c pm	10.19	4.53-4.49 pm	10.70

† U.S. cents per Canadian $.

CURRENCY RATES

February 26	Bank rate %	Special Drawing Rights	European Unit of Account
Sterling	12½	0.639311	0.678578
U.S. $	9½	1.28866	1.35814
Canadian $	11¼	1.54291	1.68281
Austria Sch.	4½	17.4613	18.3824
Belgian F	6	37.6450	39.6356
Danish K	8	6.61920	6.97257
D mark	3	2.38532	2.50644
Guilder	6½	2.57476	2.71003
French Fr	9½	5.50000	5.78658
Lira	10½	1082.60	1140.60
Yen	3½	260.180	274.078
Nrwgn K	7	6.55735	6.90542
Spanish Pes	8	89.0367	93.7657
Swedish Kr	6½	5.61596	5.91466
Swiss Fr	1	2.15077	2.25790

CURRENCY MOVEMENTS

February 27	Bank of England Index	Morgan Guaranty changes %
Sterling	64.26	−40.1
U.S. dollar	84.43	−8.2
Canadian dollar	78.58	−18.9
Austrian schilling	147.64	+19.7
Belgian franc	114.80	+15.4
Danish kroner	118.55	−7.5
Deutsche Mark	150.70	+42.1
Swiss franc	195.60	+82.8
Guilder	123.15	+20.0
French franc	99.48	−6.1
Lira	54.12	−49.4
Yen	142.94	+44.1

Based on trade weighted changes from Washington agreement December, 1971 (Bank of England Index=100).

OTHER MARKETS

Feb. 27	£	$		Note Rates
Argentina Peso	2214-2224	1095-1104	Austria	26.75-27.75
Australia Dollar	1.7890-1.7940	0.8850-0.8858	Belgium	59.5-60.5
Brazil Cruzeiro	44.35-45.35	21.92-22.42	Denmark	10.30-10.45
Finland Markka	8.01-8.03	3.9585-3.9605	France	8.55-8.65
Greek Drachma	73.760-74.584	36.97-36.85	Germany	3.67-3.77
Hong Kong Dollar	9.75-9.76	4.8200-4.8250	Italy	1,670-1,720
Iran Rial	147.64-157.75	73-78	Japan	406-416
Kuwait Dinar (KD)	0.551-0.561	0.2726-0.2775	Netherlands	3.97-4.07
Luxembourg Frc.	59.05-59.15	29.21-29.23	Norway	10.22-10.35
Malaysia Dollar	4.4154-4.4359	2.1885-2.1895	Portugal	90-97
New Zealand Dlr.	1.9011-1.9017	0.9449-0.9471	Spain	136-144.5
Saudi Arab. Riyal	6.73-6.80	3.3374-3.3569	Switzerland	3.30-3.40
Singapore Dollar	4.474-4.484	2.2110-2.2130	United States	2.0200-2.0300
Sth. African Rand	1.7104-1.7235	0.8457-0.8517	Yugoslavia	41-45

Rate given for Argentina is free rate.

EXCHANGE CROSS RATES

Feb. 27	Pound Sterling	U.S. Dollar	Deutschem'k	Japan'se Yen	French Franc	Swiss Franc	Dutch Guild'r	Italian Lira	Canada Dollar	Belgian Franc
Pound Sterling	1.	2.025	3.745	409.0	8.655	3.370	4.042	1699.	2.418	59.19
U.S. Dollar	0.494	1.	1.852	202.2	4.269	1.666	1.999	840.0	1.196	29.23
Deutschemark	0.267	0.540	1.	109.2	2.306	0.900	1.079	453.7	0.646	15.76
Japanese Yen 1,000	2.445	4.945	9.156	1000.	21.11	8.240	9.883	4154.	5.912	144.3
French Franc 10	1.158	2.342	4.337	473.7	10.	3.903	4.682	1966.	2.800	68.35
Swiss Franc	0.297	0.600	1.111	121.4	2.563	1.	1.200	504.3	0.718	17.54
Dutch Guilder	0.247	0.500	0.926	101.2	2.136	0.834	1.	420.3	0.598	14.62
Italian Lira 1,000	0.589	1.190	2.204	240.7	5.082	1.984	2.379	1000.	1.423	34.79
Canadian Dollar	0.414	0.836	1.549	169.1	3.571	1.394	1.672	702.6	1.	24.44
Belgian Franc 100	1.692	3.422	6.337	692.0	14.61	5.702	6.840	2876.	4.091	100.

EURO-CURRENCY INTEREST RATES

Feb. 27	Sterling	U.S. Dollar	Canadian Dollar	Dutch Guilder	Swiss Franc	West German Mark	French Franc	Italian Lira	Asian $	Japanese Yen
Short term	NIl 14	10-10¼	8¾-9¾	7¼-7½	[illegible]	3½-3¼	5¼-5½	7-10	—	2¼-3¼
7 day's notice	13¾-13⅞	10⅛-10⅜	8¾-9¾	7¼-7½	[illegible]	3½-3¾	6¼-6¾	10-11	10⅜-10⅝	1¾-2¾
Month	13⅛-13⅜	10¼-10½	10⅛-10⅜	6⅞-7⅛	[illegible]	3⅞-3⅞	6⅞-7⅛	11¼-12¼	10⅜-10⅝	2¾-3½
Three months	12⅞-12⅞	10⅞-11⅛	10¾-11⅛	6⅞-7⅛	[illegible]	3⅞-4	7½-8	12¼-13¼	11-11⅛	3⅞-4
Six months	11⅞-11⅞	11⅛-11⅜	10⅞-11⅛	6⅞-7⅛	[illegible]	4⅛-4¼	8⅜-8⅞	12½-13½	11⅛-11⅜	4⅛-4½
One year	11⅞-11⅞	11⅛-11⅜	10⅞-11⅛	6⅞-7⅛	[illegible]	4⅛-4⅜	9-9¼	13-14	11⅛-11⅜	3⅞-4½

The following nominal rates were quoted for London dollar certificates of deposit: one month 10.35-10.45 per cent; three months 10.65-10.75 per cent; six months 11.05-11.15 per cent; one year 10.95-11.05 per cent.

Long-term Eurodollar deposits: two years 10¼-10⅜ per cent; three years 10¼-10⅜ per cent; four years 10¼-10⅜ per cent; five years 10¼-10⅜ per cent nominal closing rates. Short-term rates are call for sterling, U.S. dollars and Canadian dollars; two-day call for guilders and Swiss francs. Asian rates are closing rates in Singapore.

INTERNATIONAL MONEY MARKET

Paris call money cut

Interest rates were generally lower yesterday in Paris, and call money fell from 6½ per cent on Monday to 6⅜ per cent. This is the same level at which the Bank of France buys paper when intervening in the market, and a rate of 6⅜ per cent for call money was seen as inevitable in some quarters. Longer term rates also declined with one-month money at 6⅞-6⅞ per cent compared with 6⅞-6⅞ per cent and three-month money at [illegible] per cent against 7-7¼ per cent. The six-month rate was fixed at 7⅛-7⅛ per cent from [illegible] per cent while the 12-month rate remained at 7¼-7⅜ per cent.

BRUSSELS — Following Monday's reduction of rates on short term Treasury Certificates, the rate on four-month Belgian bond fund papers fell at yesterday's auction to 8.1 per cent from 8.3 per cent. The general easing in rates was seen by some as a general move towards promoting industrial investment, although market sources were unwilling to suggest what move, if any, the authorities may make today with regard to the Lombard and discount rates. Deposit rates for the Belgian franc (commercial) were unchanged however, apart from one-month deposits which were quoted at 7¾-8 per cent, down from 7⅞-8¼ per cent previously.

MILAN—One and two-month money rates were increased yesterday by ¼ per cent to 11⅞ per cent and 11¾ per cent respectively. The rise was described as being due to mainly technical factors arising at the end of the month.

FRANKFURT — Interbank money rates showed a rather mixed tendency yesterday, with call money slightly firmer at 4.0-4.1 per cent compared with 3.95-4.05 per cent previously, and one-month money up at 3.95-4.05 per cent from 3.90-4.00 per cent.

NEW YORK—13-week Treasury bills were quoted at 9.49 per cent and 26-week bills at 9.53 per cent. Federal funds traded at 10-10⅛ per cent in generally steady market conditions.

AMSTERDAM—Call money rose to 7⅛-7⅜ per cent from 7⅛-7⅜ per cent and one-month money was also firmer at 7¼-7½ per cent compared with 7⅛-7⅜ per cent. The three-month rate was unchanged at 7⅛-7⅜ per cent while six-month money rose to 7¼-7½ per cent from 7⅛-7⅜ per cent.

HONG KONG—Conditions in yesterday's money market were steady, with call money at 10⅞ per cent.

GOLD

Further fall

Gold fell $3½ to close at $247¼-$248. It opened at $248¾-$249½, slightly firmer than the Monday close, but eased to $247.80 at the morning fixing, and $247.90 at the afternoon fixing. The lowest level touched was $246¼-246¾ in the afternoon shortly after New York began trading.

In Paris the 12½ kilo gold bar was fixed at FFr 34,245 per kilo ($250.54 per ounce) in the morning, compared with FFr 34,100 ($248.50) Monday afternoon.

In Frankfurt the 12½ kilo bar was fixed at DM14,740 per kilo ($247.80 per ounce), compared with DM14,875 ($250.30) previously.

	February 27	February 26
Gold Bullion (fine ounce)		
Close	$247¼-248	$251½-252¼
Opening	$248¾-249½	$252½-253¼
Morning fixing	$247.80 (£122.376)	$252.10 (£125.425)
Afternoon fixing	$247.90 (£122.601)	$251.00 (£124.875)
Gold Coins, domestically		
Krugerrand	$270-274 (£133½-135½)	$283½-285½ (£141-143)
New Sovereigns	$70¾-72¾ (£35-36)	$70½-72½ (£35-36)
Old Sovereigns	$74-76 (£36½-37½)	$74-76 (£36¾-37¾)
Gold Coins, internationally		
Krugerrand	$254-256 (£125½-126½)	$259-261 (£128½-129½)
New Sovereigns	$65-67 (£32¼-33¼)	$65-67 (£32¼-33¼)
Old Sovereigns	$74-76 (£36½-37½)	$74-76 (£36¾-37¾)
$20 Eagles	$317-322	$318-323
$10 Eagles	$174-179	$175-180
$5 Eagles	$120-125	$120-125

MONEY MARKET

Interest rates decline

Bank of England Minimum Lending Rate 14 per cent (since February 8, 1979)

Interest rates continued to decline in London yesterday on continued buying interest. Three-month sterling Certificates of Deposit fell to 12⅜-12⅛ per cent from 12⅝-12⅜ per cent on Monday, while discount houses' buying rates for three-months Treasury bills eased to 11⅞ per cent from 12⅛ per cent previously. With MLR at a penal rate of 14 per cent and market rates indicating an MLR of 12½ per cent on the old formula, market views were rather divided as to whether the authorities would reduce the rate this Thursday, with some pointing out the relatively short period since the introduction of the present rate and others projecting a full 1 per cent drop. However, the past performance of MLR has tended to show sharp upward increases, with corresponding falls being of a gentler nature.

Day to day funds in the money market were again in short supply, although not on such an acute scale as the previous few days. Nevertheless the authorities lent a moderate amount to two or three discount houses at MLR for repayment today. They also bought a small amount of Treasury bills, leaving the total assistance still termed as moderate.

The market was helped by banks bringing forward balances a very large way over target.

In the interbank market, overnight loans opened at 13⅞-14 per cent and eased to 14-14½ per cent. Rates tended to decline further after the authorities' help in the afternoon, but closing balances were dearer at 17-18 per cent.

Rates in the table below are nominal in some cases.

LONDON MONEY RATES

Feb. 27 1979	Sterling Certificate of deposit	Interbank	Local Authority deposits	Local Auth. negotiable bonds	Finance House Deposits	Company Deposits	Discount market deposit	Treasury Bills ♦	Eligible Bank Bills ♦	Fine Trade Bills ♦
Overnight	—	13¼-18	—	—	—	—	12½-14	—	—	—
2 days notice	—	—	13⅛-13¾	—	—	—	—	—	—	—
7 days or	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7 days notice	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
One month	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Two months	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Three months	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Six months	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Nine months	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
One year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Two years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Local authority and finance houses seven days' notice, others seven days' fixed. [illegible]

Finance Houses Base Rates (published by the Finance Houses Association) 12½ per cent from February 1, 1979. Clearing Bank Deposit Rates for small sums at seven days' notice [illegible] per cent. Clearing Bank Rates for lending [illegible] per cent. Treasury Bills: Average tender rates of discount 12.2281 per cent.

MONEY RATES

NEW YORK

Prime Rate	11.5-11.75
Fed Funds	10.0625
Treasury Bills (13-week)	9.49
Treasury Bills (26-week)	9.53

GERMANY

Discount Rate	3
Overnight Rate	4.05
One month	4.0
Three months	4.15
Six months	4.30

FRANCE

Discount Rate	9.5
Overnight Rate	6.375
One month	6.875
Three months	6.875
Six months	7.25

JAPAN

Discount Rate	3.5
Call (Unconditional)	4.5
Bills Discount Rate	4.5625

WORLD STOCK MARKETS

Early Dow fall of 9.2 on inflation worries

INVESTMENT DOLLAR PREMIUM
$2.60 to £1—91¼% (92½%)
Effective $2.0225 48½% (49½%)

RISING WORLD oil prices and speculation that U.S. interest rates are headed higher drove stock prices on Wall Street broadly lower in active early dealings.

The Dow Jones Industrial Average sustained a fall of 9.18

Closing prices and market reports were not available for this edition.

to $11.94 at 1 pm, while the NYSE All Common Index declined 62 cents to $54.16 and losses outnumbered rises by more than a five-to-one ratio. Turnover expanded sharply to 21.29m shares from Monday's 1 pm figure of 14.70m.

Heavily-traded **Polaroid** retreated 2¼ to $39⅝, while **Boeing** lost $2 to $63½. **Avon Products** $1 to $45¾ and **General Motors** 1¼ to $53½.

National Medical Enterprises slipped 1⅞ to $19½. The company could give no reason for the stock's decline.

IBM receded 3½ to $301¼ and **Du Pont** surrendered $2 to $130.

Steels and Oils generally lost fractions.

Casino Gambling shares, after Monday's buoyancy on Resorts International being granted a permanent licence to operate its casino in Atlantic City, New Jersey, were mainly narrowly mixed at mid-session yesterday.

On the American SE, **Resorts International "A"** reacted 1¼ to $46½ following the previous day's advance of 4½.

Bally Manufacturing and Caesars World also hope to open casinos in New Jersey's southern resort city later this year.

THE AMERICAN SE Market Value Index reacted 1.19 to 162.17 at 1 pm in fairly busy trading. Volume 2.53m shares (1.35m).

Syntex, among the Amex volume leaders, eased ¼ to $14. The Government is seeking more information on Syntex's acquisition of Den-Tal-Ez.

Polycrome, a take-over candidate, were unchanged at $23½ after jumping $10 on Monday.

Canada

Stock prices on Canadian markets presented a mixed appearance at noon yesterday after active trading.

The Toronto Composite Index, however, was 1.6 firmer at 1,395.2 at mid-day, helped along by advancing Real Estate issues. The Oils and Gas index managed a rise of 7.4 to 1,984.7, while Papers put on 0.49 to 163.10, but Golds shed 4.0 more to 1,588.9. Metals and Minerals declined 2.1 to 1,268.8. Utilities 0.67 to 202.71 and Banks 0.42 to 311.93.

The Real Estate index jumped over 61 points more as **Trizec** rose ½ to C$21½. Olympia and York is seeking control of an English Property company, which holds the majority of Trizee shares. **Nu-West "A"** put on ½ to C$17½ and **Daon** ½ to C$11½.

Home Oil "B" lost ½ to C$44½ after annual results, but **Selkirk "A"** picked up ½ to C$17½ on a dividend increase.

Among Oils, **Dome Petroleum** moved ahead 2½ to C$112½. **Bow Valley** ½ to C$24½ and **Texaco Canada** ½ to C$51½.

Tokyo

With export-orientated issues leading the way, stock prices mainly retreated in another thin trade.

The Nikkei-Dow Jones Average declined 23.83 to 6,065.29 and the Tokyo SE index 1.03 to 449.54. Volume 200m shares (180m).

Press reports that Toshikazu Hashimoto, councillor at the Ministry of International Trade and Industry, said that he has found a growing move in the U.S. Congress to impose surcharges on imports from Japan and other countries whose trade balance with the U.S. is in surplus brought export-related Electricals, Vehicle and Camera shares down over a broad front.

Sony fell Y30 to Y1,650. **TDK Electronics** Y40 to Y1,790. **Pioneer Electronics** Y120 to Y2,180. **Olympus** Y9 to Y726. **Ricoh** Y4 to Y563, **Nissan Motors** Y8 to Y688 and *Toyota Motor* Y5 to Y860.

Steels, Non-ferrous Metals, Oils, Communications and many other shares drifted easier in the absence of fresh market factors, but Chemicals and some speculatives hardened.

Germany

Stocks improved afresh, although trading remained quiet, with Bourses in some parts of Germany closing early for the Shrove Tuesday holiday.

Among Engineerings, **Linde** moved ahead DM 4.50, **Degussa** DM 7.50 and **KHD** DM 2.80. **Volkswagen** gained DM 1.50 in Motors, **Thyssen** DM 1.90 in Steels and **Siemens** DM 1.30 in Electricals. **Deutsche Bank** added DM 1.50.

There was a good turnover in the Options market, where prices rose slightly, while French stocks also closed firmer.

Domestic Bonds held fairly steady, although gains of up to 15 pfennigs and losses of up to 35 pfennigs were recorded in isolated instances. The Regulating Authorities sold DM 18.7m nominal of paper after selling DM 29.6m the previous day. Mark Foreign Loans were easier.

Paris

Official share prices were not available due to a two-day pay strike by Paris Bourse employees, which began at mid-day yesterday.

A special procedure used by stockbrokers to provide forward market share quotes during previous strikes has not been *initiated, Bourse sources stated.*

Hong Kong

Fuelled by local speculative buying ahead of today's Budget, the market gained further ground yesterday in light trading, lifting the Hang Seng index 7.76 more to 518.93.

Hong Kong Bank added 30 cents at HK$18.30, with the *market expecting the announcement of good final results later in the day.*

Hongkong Land, HK$7.60, and **Hong Kong Wharf**, HK$29.50, improved 10 cents apiece, while **Sun Hung Kai Securities**, benefiting from increased final dividend and net profits, put on 4 cents more to HK$1.94.

Cheung Kong advanced 45 cents to HK$9.70 and **Sun Hung Kai Properties** 30 cents to HK$7.90, but **Swire Properties** receded 5 cents to HK$2.88. **Hutchison Whampoa** gained 10 cents to HK$4.15.

Johannesburg

Gold shares were mostly lower, reflecting the trend in the Bullion price.

Diamond leader **De Beers**, however, advanced 20 cents to R9.40 on overnight U.S. demand. Coppers were basically unchanged, while Platinums were easier, although **Implats** gained 10 cents to R4.55. Collieries were firmer, but Industrials showed an easier inclination in a thin business.

Australia

An easier tendency prevailed yesterday in generally quiet trading marked by a continued *absence of Overseas buyers.*

The Coals sector, however, was firm and active, **Thiess** featuring with an advance of 11 cents to A$2.60 in response to an 18.8 per cent rise in interim profits. **Howard Smith**, A$4.45, and **Utah**, A$4.30, gained 5 cents apiece.

Mining leaders generally declined despite gains for most metals on the London Metals Exchange *on Monday*. **MIM** receded 6 cents to A$3.20, **CRA** 5 cents to A$3.60 and **Bougainville Copper** 4 cents to A$1.95.

On the Industrial boards, **BHP** reacted 10 cents to A$10.45 and **CSR** *retreated 7 cents more to* A$3.45.

Among easier Banks, **BNS Wales** shed 5 cents to A$3.45 and **CBA** 4 cents to A$2.61, but Properties hardened in places. *Hooker gained 1 cent to 89 cents* following better-than-expected interim results. **Stocks and Holdings** added 5 cents at A$3.55 and **Lend Lease** 4 cents at A$2.82.

Amsterdam

Shares remained in easier vein in quiet conditions.

Royal Dutch hardened a shade against the trend in Dutch internationals. **Akzo**, however, lost Fl 0.30 to Fl 31.30 ahead of announcing a profit for last year after a large 1977 loss.

Elsewhere, **Elsevier** receded Fl 2.80 and **Pakhoed** Fl 1.80.

State Loans turned firmer after the recent declining trend.

NOTES: Overseas prices shown below exclude $ premium. Belgian dividends are after withholding tax.
◆ DM 50 denom. unless otherwise stated, yields based on net dividends plus tax.
♥ Pta 500 denom. unless otherwise stated.
♣ DKr 100 denom. unless otherwise stated.
ϕ SwFr 500 denom. and Bearer shares unless otherwise stated. ¶ Y50 denom. unless otherwise stated. $ Price at time of suspension. a Florins. b Schillings. c Cents. d Dividend after pending rights and/or scrip issue. e Per share. f Francs. g Gross div. %. h Assumed dividend after scrip and/or rights issue. k After local taxes. m % tax free. n Francs including Unilac div. p Nom. q Share split. s Div. and yield exclude special payment. t Indicated div. u Unofficial trading. v Minority holders only. y Merger pending. * Asked. † Bid. § Traded. ‡ Seller. ≠ Assumed. xr Ex rights. xd Ex dividend. xc Ex scrip issue. xa Ex all. Δ Interim since increased.

BASE LENDING RATES

A.B.N. Bank	13½%	■ Hill Samuel	§13½%
Allied Irish Banks Ltd.	13½%	C. Hoare & Co.	†13½%
Amro Bank	13½%	Julian S. Hodge	14½%
American Express Bk.	13½%	Hongkong & Shanghai	13½%
A P Bank Ltd.	13½%	Industrial Bk. of Scot.	12½%
Henry Ansbacher	13½%	Keyser Ullmann	13½%
Associates Cap. Corp.	14 %	Knowsley & Co. Ltd.	14½%
Banco de Bilbao	13½%	Lloyds Bank	13½%
Bank of Credit & Cmce.	13½%	London Mercantile	13½%
Bank of Cyprus	13½%	Edward Manson & Co.	14½%
Bank of N.S.W.	13½%	Midland Bank	13½%
Banque Belge Ltd.	14 %	■ Samuel Montagu	13½%
Banque du Rhone et de la Tamise S.A.	14 %	■ Morgan Grenfell	13½%
Barclays Bank	13½%	National Westminster	13½%
Bremar Holdings Ltd.	14½%	Norwich General Trust	13½%
Brit. Bank of Mid. East	13½%	P. S. Refson & Co.	13½%
■ Brown Shipley	13½%	Rossminster	13½%
Canada Perm't Trust	13½%	Royal Bk. Canada Tst.	13½%
Cayzer Ltd.	14 %	Schlesinger Limited	13½%
Cedar Holdings	13½%	E. S. Schwab	14½%
Charterhouse Japhet	13½%	Security Trust Co. Ltd.	14½%
Choulartons	13½%	Shenley Trust	15 %
C. E. Coates	13½%	■ Standard Chartered	13½%
Consolidated Credits	13½%	Trade Dev. Bank	13½%
Co-operative Bank	*13½%	Trustee Savings Bank	13½%
Corinthian Securities	13½%	Twentieth Century Bk.	14½%
Credit Lyonnais	13½%	United Bank of Kuwait	13½%
Duncan Lawrie	13½%	Whiteaway Laidlaw	14 %
The Cyprus Popular Bk	13½%	Williams & Glyn's	13½%
Eagil Trust	13½%	Yorkshire Bank	13½%
English Transcont.	13½%		
First Nat. Fin. Corp.	14 %		
First Nat. Secs. Ltd.	14 %		
■ Antony Gibbs	13½%		
Greyhound Guaranty	13½%		
Grindlays Bank	‡13½%		
■ Guinness Mahon	13½%		
■ Hambros Bank	13½%		

■ Members of the Accepting Houses Committee
* 7-day deposits 11%, 1-month deposits 11¼%.
† 7-day deposits on sums of £10,000 and under 11%, up to £25,000 11½%, and over £25,000 11¾%.
‡ Call deposits over £1,000 11%.
§ Demand deposits 11%.

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FINANCIAL TIMES SURVEY

Wednesday February 28 1979

BEARINGS

The recent past has not been a happy time for the European bearings industry, which has been faced with low demand for its products and competition from cheaper imports. There are signs that a recovery is under way, though this is likely to be slower in the UK than in other West European countries.

Industry looks for higher prices

By Hazel Duffy
Industrial Correspondent

OVER THE past four years, the European bearings industry has been suffering as a result of the long recession in manufacturing industry. This has been aggravated by surplus capacity, brought about partly because of depressed demand from customer industries, but also by the intense competition, from the Japanese and others.

In some European markets, notably the UK and France, the prospects for any substantial improvement *remain* poor. But in other markets, particularly Germany, the climb out of recession has been more marked, and demand for bearings is picking up. At the same time, competition from Japanese sources has lessened because of the appreciating yen; and the benefits of rationalisation in Europe—which is still going on—should start to show through.

The bearings industry reflects very closely the pattern in manufacturing industry as a whole. About 30 per cent of output goes to the automotive industry (higher for the specialised products), which means that virtually all bearings manufacturers are very dependent on the situation in that industry. The general engineering industry takes around another 15 per cent, followed by machine tools, aerospace and consumer durables.

Competition among bearings manufacturers has been intense for many years; it tends to be a product where customers go to the cheapest source—particularly in the automotive and consumer durables industries, where price of the finished product is all-important.

The Japanese push started in the late 1960s, but their presence became felt in full strength with the recession that followed the 1973 oil crisis. The European manufacturers took some time in deciding how to react to this challenge; they decided finally that an anti-dumping action under the EEC rules was the best solution.

The Japanese have always rejected this allegation which resulted in the European Commission imposing a provisional holding on Japanese imports. But some 18 months ago, the Japanese *gave* an undertaking to put their prices up by 20 per cent. The European companies agree that the Japanese have stuck to this agreement—although they suggest that prices have not been increased by the full amount of the yen appreciation. The Japanese companies took their case to the European Court in Luxembourg in January. The verdict of the full court is still pending, but the Advocate General recently came out with his recommendation that the 15 per cent suspended anti-dumping duty *should be declared void.*

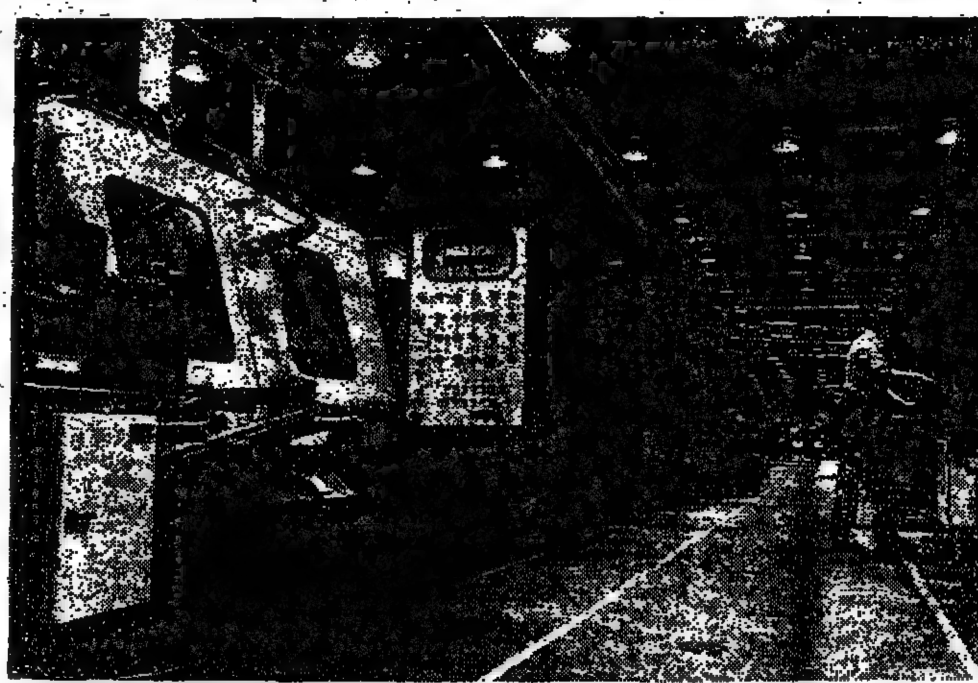
Quite apart from Japanese competition, the dominant problem for the industry over the past three years has been lack of demand. Nobody could have predicted with accuracy the extent of the recession which followed 1973, but the bearings manufacturers were caught out badly.

Although there had been a certain amount of rationalisation—and in the case of the UK there had been a regrouping of the big British-owned companies—it had not gone far enough to deal with the scale of the recession that followed. SKF, for example, had chosen at about that time to start implementing a European-wide marketing and planning operation. SKF production of certain types of bearings is now concentrated on particular plants, while the factories are loaded according to demand and capacity, again on a European rather than an individual country basis.

A computerised centre has been set up in Brussels to co-ordinate the scheme. But its real benefits will not show up until demand improves and the plants come closer to capacity production. SKF's problem areas in Europe are France and the UK. In order to bring the latter into profit by 1981, SKF announced recently that it is concentrating all its bearings production in one factory, leading to the loss of 600 jobs at its factory in Scotland. In Germany, where SKF has a strong competitor in FAG, it has been more successful. Its experience in Italy has also been more encouraging than in France and the UK.

FAG (Kugelfischer Georg *Schafer is its full name) is the* second biggest bearings company in Europe. Based at Schweinfurt, the group has manufacturing and marketing facilities on a worldwide basis, and also exports nearly half of its German production. In 1977, it increased profitability in spite of the difficult economic circumstances. Sales of the German companies in 1977 increased by 6.5 per cent, although worldwide the growth was only 2.7 per cent. Last year proved more difficult, however, and turnover is not expected to be above the 1977 level. Export *from* the German companies decreased slightly.

FAG has also been increasing slightly its employment—in 1977 it totalled 23,867 throughout the group—but this was due mainly to increased activity in its other companies making hydraulic brake parts and grinding wheels.



Linked lines of bore grinders for bearing inner ring grinding at SKF's factory in Gothenburg, Sweden.

UK TRADE IN BALL AND ROLLER BEARINGS IN 1978

	IMPORTS £m.		EXPORTS £m.
TOTAL	85.8		80.3
of which		of which	
Germany	29.7	France	9.5
U.S.	14.1	Germany	8.8
Japan	9.4	Italy	7.2
France	9.3	U.S.	5.5
Sweden	6.4	Sweden	4.9
Italy	5.3	South Africa	...4.4
Poland	0.9	Spain	3.8
Others	10.5	Others	36.7

After SKF and FAG, Ransome Hoffmann Pollard in the UK, and SNR, a Renault subsidiary, are the next biggest European companies. They are followed by Timken, which has plants in the UK, France and Germany. The Timken group is American-based, and is the world's biggest producer of tapered roller bearings. This type of bearing is one of five major types—the other four are ball, cylindrical, spherical, and needle. Timken is somewhat *different from the other major* manufacturers in so far as it specialises in a particular type of bearing. The group's results suggest that it has been a very successful policy, although its strong base in the U.S., where the motor industry has been far more buoyant than in Europe, is part of the reason.

The main focus of attention *for the European industry now* is to get prices higher. The excess capacity and highly competitive conditions of the recession led to companies going in for aggressive pricing in order to maintain market share. In a capital intensive industry, the view *taken was that this was* the only way to keep factories running at an economic level, although it has still been necessary to close down factories for short periods. This all added up to prices being very depressed in the high-volume sectors of the industry.

Over the past year or so, however, prices have been rising as *companies took advantage of the* small improvement in demand. In some markets, for example the UK, where the motor industry has had serious problems, this has been a more difficult exercise. But the signs are that the leading companies will continue to pursue a policy of higher prices wherever possible, and accept that they might have *to lose market share as a result.* The effect of the low prices policy has been reflected in the poor financial results of much of the industry.

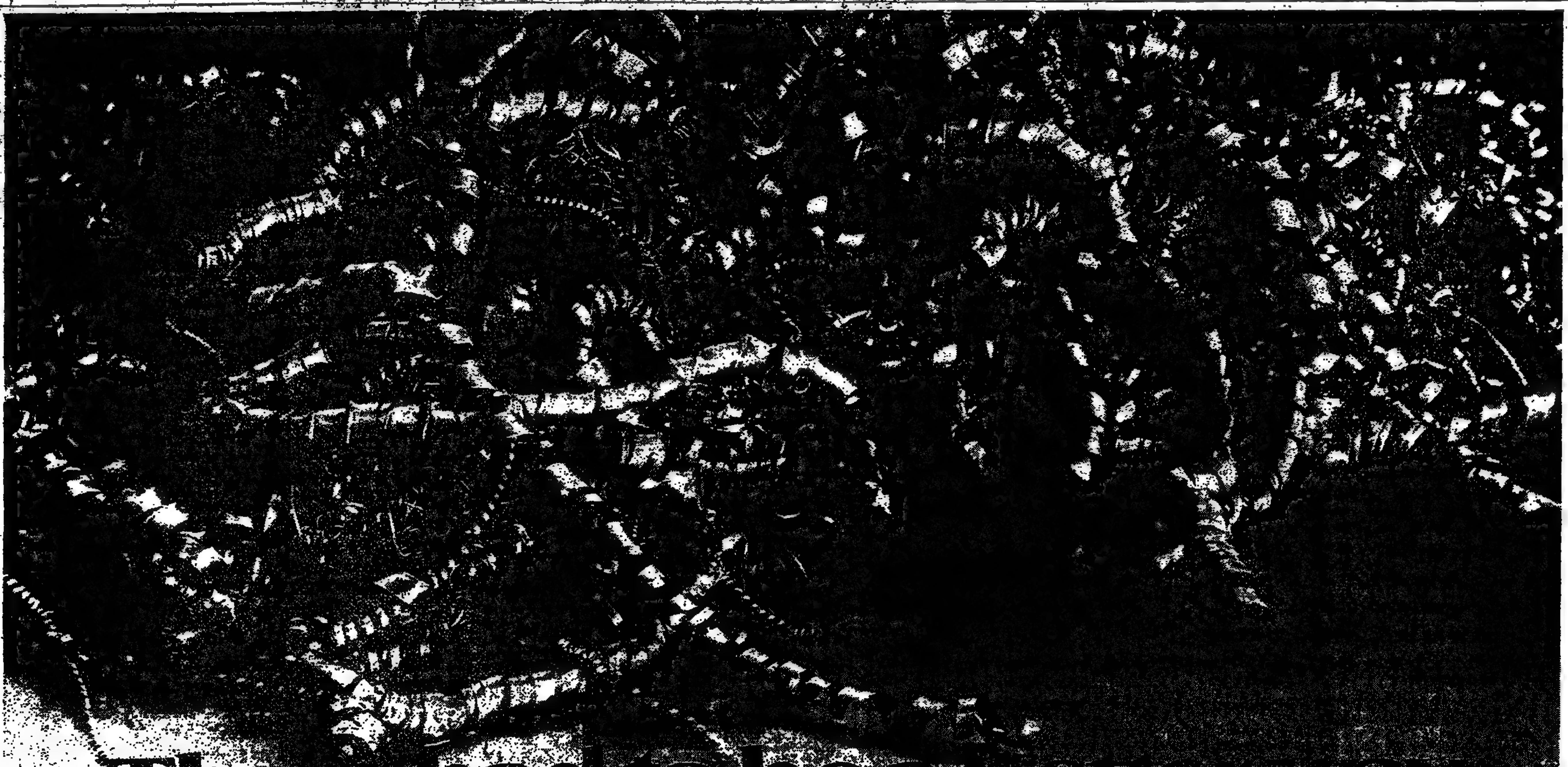
*A growing threat to maintain*ing price increases, however, comes from Eastern Europe. Initially concentrating on the replacement market, the East Europeans are moving more into supplying original equipment manufacturers with their bearing requirements, and at prices, say the European bearing companies, which are sometimes as *much as 30 per cent below the* prices that they are charging. The markets where the East Europeans have been particularly successful are the UK, France and Spain, which are those that seem to be the most price sensitive. The countries which are the strongest in the East European export league are Poland, the Soviet Union and Czechoslovakia.

Companies used to take comfort from the fact that East European bearings were of a lower quality, but this is becoming less apparent now. Some *manufacturers have been press*ing for an investigation on dumping to be taken up along the lines of that against the Japanese, but it may be difficult to reach a European consensus on such action, as the damage is more localised than that done by the Japanese.

Bearings are a mature product. They can be improved upon, and all the *major* companies spend considerable amounts on development. The American subsidiary of General Motors, New Departure-Hyatt, claims its new integral ball-*bearing spindle for fitting in* front-wheel-drive cars constitues a radical innovation in design. But it seems unlikely that there is going to be a breakthrough in the design of high-volume bearings. In this area, rationalisation of variants and productivity improvement, coupled with higher prices, are the only way out of the present malaise affecting large sectors of the industry.

Mainly for this reason, diversification among bearings manufacturers is gathering speed. Although bearings are still the dominant product for *all* the main groups, the growth in non-bearings products has been greater than for bearings, and these propositions could change significantly over the next few years.

Companies' policy on diversification varies—SKF, for example, has been expanding in cutting tools, which is a logical addition to its special steel activities. Timken is heavily involved in other alloy steel products, which provide over a quarter of net sales, while FAG is engaged in *a variety of related activities.* With the outlook for manufacturing industry in Europe promising little in the way of growth for bearings, diversification into other branches of engineering provides a logical solution.



BEARINGS II

FIVE COMPANIES IN BRIEF

Company	Country of origin	Financial year	Sales $m	Bearings as % of sales	No. of employees
SKF	Sweden	1977	1,803	72	57,209
Timken	U.S.	1977	974	71*	23,089
FAG	Germany	1977	645	75	23,867
NSK	Japan	1977-78	362	67	8,800
RHP	UK	1977-78	172	87	9,588

* Including rock bits. Source: Annual reports.

Rolling round the world

THE MANUFACTURE of ball and roller bearings is a high-volume, capital-intensive business, requiring specialised equipment and specialised technical skills. A standard bearing in the popular size range may be produced at the rate of 200,000 units per month, or 2½m a year; the biggest company, SKF, has a worldwide output of around 500m bearings a year. In most industrial countries production of ball and roller bearings is concentrated in the hands of a few companies: it is very difficult for a newcomer to break into the business, except through acquisition.

The manufacturers supply bearings direct to the big OEMs (original equipment manufacturers) such as the vehicle companies, but rely on distributors to supply the smaller OEMs and the replacement market. Thus in the UK bearing houses like Bearing Service, Wyko and Wide Range provide an essential link, through their network of branches, between the manufacturers and the many thousands of equipment users who require a replacement service. Other big stockists, such as Claude Rye and E. J. Jack, carry a wide range of bearings, both UK produced and imported, supplied in small lots both to the smallers OEMs and to the replacement market.

The industry is highly international, both in the extent of inter-trading between the main producing countries and in the fact that the leading companies tend to make and sell their bearings in most major markets. SKF has built or acquired manufacturing plants in virtually all its main markets: its five big European plants specialise in particular bearing types to achieve economies of scale, and thus SKF is responsible for a significant proportion of the exports and imports of bearings within Europe.

Similarly Timken of the U.S., which specialises in taper roller bearings, has its own plants in the U.K., France, Brazil, South Africa and Australia. FAG of Germany, second in size to SKF among European-owned companies, has the bulk of its production concentrated in Germany (it exports nearly half its output), but it has manufacturing subsidiaries in several overseas countries, including the U.S., Canada and Brazil; production of these plants is supplemented by direct exports from Germany.

Some way behind the giants, but particularly strong in their home markets, are RHP in Britain, formed in 1970 by a Government-encouraged merger of three separate companies, and SNR in France. SNR, a subsidiary of Renault, has its main factories in France and exports about 30 per cent of its production. It has a joint venture in Italy with FAG and RHP to make spherical roller bearings.

In a slightly more specialised sector of the industry are the two leading manufacturers of needle roller bearings, Torrington of the U.S., a subsidiary of Ingersoll Rand, and INA of Germany, part of the Schaeffler group; Nadella of France is another significant contender in needle bearings. Torrington has plants in the UK, Germany and Brazil, as well as in the U.S. INA, too, has a wide international network, with factories in Germany, France, Italy, the UK, Spain, Brazil and the U.S. Torrington has a joint venture with NSK in Japan, while INA has licensed NTN to make its needle bearings in Japan.

Torrington and INA compete against SKF; FAG and the other across part of their range, but their special technologies protect them to some extent from the price-cutting which has taken place in this industry in recent years. Similarly, Fafnir, a subsidiary of Texton, has a special strength in precision ball bearings for the aerospace industry: it is also an important supplier to the machine tool, farm machinery and construction equipment sectors.

The four big Japanese companies, NSK, Koyo Seiko, NTN and Nichi-Fujikoshi, have a substantial share of most major markets. The enlargement of manufacturing facilities in Europe and North America is likely to consolidate their position.

Finally competition from Eastern Europe appears to be growing. A number of brands such as FLT (Poland), GPZ (Soviet Union) and others are available in most European markets, often at low prices. The quality of most of these bearings is said to be good, and availability has been improved: some large OEMs are now incorporating East European bearings into their products.

Geoffrey Owen

The U.K.

Little encouragement

THE UK market for bearings has been particularly depressed in the past two to three years, and has resulted in deteriorating financial returns, plus the loss of more than 2,000 jobs, equal to about 10 per cent of the work force. The latest industrial production figures, showing that the brief surge earlier last year had petered out by the end of the year, will offer little encouragement for any manufacturer of components, while the prospect of inflation rising at a faster rate will make this an even more difficult market. At the same time, the problems in the motor industry, which is the single biggest customer for bearings, have made the bearings manufacturers even more wary of predicting much improvement.

The UK, more than other European markets, is also suffering from the high level of car imports. This means that the OEMs (original equipment manufacturers) are forming a shrinking sector for the bearings manufacturers relative to their Continental counterparts, although the greater strength of the component sector is off setting this problem to a certain extent. Prospects for the engineering industry generally, however, are not encouraging—and this is the bearings industry's second biggest customer.

Exported

Exports are one way out of the UK market problems. Last year, the industry exported bearings to the value of £80.8m, which is around 30 per cent of total sales. Import penetration is causing more concern. More than half the UK market, in value, consists of imports, of which a large proportion is accounted for by transfer between companies with plants in other countries. But the industry's trade association, the Ball and Roller Bearing Manufacturers Association, maintains that "a significant percentage are low-priced bearings of Japanese origin." Low-priced East European bearings are also significant.

The UK industry is headed by Ransome Hoffmann Polard (RHP), which probably has around 25 per cent of the market. The company was brought about by the merger of three companies in the late 1960s, which was followed by considerable rationalisation. In the light of what has happened to the market over the past three to four years, the merger can be seen to have been even more necessary than appeared at the time.

A Talyrond machine linked to a reference computer being used to check the accuracy of RHP bearings.

The group suffered a setback in profit last year, returning a pre-tax profit of £3.8m (bearings £2.1m) against £5.1m (bearings £3.4m) in the previous year, reflecting the pressure on margins encountered by RHP maintaining its market share. The group was marginally more optimistic about the current year, particularly as regards prices, when its report was published in December.

RHP's dominance in the UK market has made conditions for its competitors that much tougher, and particularly for SKF, which is competing in broadly the same range. SKF's UK operation has been losing money to the extent of an estimated £5m last year. In January, it announced that it would cease bearings production at its Scottish plant by the middle of the year, and will concentrate all its production at Sundon, near Luton. This latter plant has already absorbed all the work previously done at SKF's Luton plant, which has been closed down. Sundon will not receive an investment of £3.25m over the next couple of years. As a result of this programme, SKF expects the UK to be profitable again by 1981.

British Timken, a subsidiary of Timken in the U.S., is the next biggest bearings producer in the UK. It has two plants in the UK, which is second in size to the group's American production. The boom period enjoyed by the automotive industry in the U.S. has been reflected in Timken's group results, which will be released shortly. Separate profit figures are not released for the European plants, which have been confronted by much more difficult conditions in the motor industry. British Timken, however, is understood to be profitable. Unlike SKF, Timken has not attempted to rationalise production by concentrating certain types of bearing on particular plants. The group's plants worldwide aim to supply the needs of all markets. Timken specialises in tapered roller bearings, which offer greater load carrying capacity in a similar size to other bearing types, or a smaller size for given capacity.

The UK is also the location for subsidiaries of two other American groups — Fafnir, which belongs to the Textron conglomerate, and Torrington, part of Ingersoll-Rand.

Fafnir makes bearings for the aerospace and other high technology industries—including the Rolls-Royce RB211 engines—as well as standard bearings. This specialisation has not insulated the company from the recession, however, and in the middle of last year it announced that it would be rationalising UK production with the loss of 400 jobs. Standard bearings are now concentrated at the Hednesford, Staffs, plant, which received the major part of a £2.5m capital spending programme undertaken by the company four years ago, while specialised bearings are concentrated on Wolverhampton. Prospects for Fafnir should start to look up with the long-awaited expansion in the aerospace industry, and particularly at Rolls-Royce, now getting under way.

Torrington also has two plants in the UK—at Darlington and Coventry—where it makes a range of bearings.

In the face of rationalisation in most branches of the bearings industry, some expansion is still going ahead. NSK, the big Japanese group, which opened its Peterlee, County Durham, factory in 1975, concentrates on high-volume bearings in a limited range. Expansion plans for the factory are being prepared.

Another company which plans to create some 200 new jobs by next year is Michell Bearings, part of the Vickers group. It specialises in making white-metal bearings for marine and industrial applications, and last year it moved into a completely rebuilt factory in Newcastle. The company employs around 500 at present.

Hazel Duffy

France

Slipping into deficit

THE FRENCH bearings industry has been going through a particularly tough time during the past two years. Under the pressure of overseas competition—stronger, it believes, than felt elsewhere in Western Europe—the industry has been slipping steadily deeper into deficit. The big companies—SKF France, the French offshoot of Sweden's SKF and Société Nouvelle de Roulement (SNR), the Renault subsidiary—made losses last year and a series of trimming operations have been forced on the main manufacturers.

Like the rest of the Western European industry, the French producers face strong competition from two main sources, Japan and Eastern Europe. The Japanese issue is now hanging fire in the European Court, following the anti-dumping action taken out against it, and the French feel that the competitive pressure from this direction has eased a little in the last year or so. But Eastern Europe presents other problems.

One of these derives from the success the French have had in their trade with the Comecon area. The more the French succeed in selling to the Eastern bloc countries, the more they are obliged to buy back. Thus, the industry is suffering to some extent, from the breakthroughs made by companies like Renault, Citroen and Peugeot in recent years in selling their technology to Comecon.

The second problem is one of price. Volumes of imports have not gone up very rapidly in the last two or three years, but prices have become so keen that the French manufacturers feel they have been caught in an ever-worsening spiral of trimmed margins and deeper losses.

This has become the main complaint against the Eastern Europeans, who are particularly insensitive to Western pricing systems because of their somewhat arbitrary manner of fixing wholesale rates. It has led to discussion and preparatory work on a possible anti-dumping case against the Comecon manufacturers, which may be taken up at the European level.

Despite these anxieties about the challenge from Eastern Europe, the present position is that Japanese imports are far more important in France. In 1977 they accounted for 11.4 per cent of the market, with sales valued at FFr 108m (£12.7m). On a weight basis, the Japanese accounted for 14 per cent of the market, with 4,300 tonnes of sales. Comparison of those figures with 1975 shows that there has been a clear decline; sales in that year accounted for 14.6 per cent of the market by value at FFrs 102m, and 18.7 per cent by weight at 5,300 tonnes.

East German imports still amount to only about half of the Japanese total, with sales of FFrs 47m (£5.5m) or five per cent of the market in 1977. On a weight basis of 2,800 tonnes, this accounted for about 9.2 per cent of sales. Like Japan's, East Germany's sales have stagnated a little in the past three years, having accounted for 5.9 per cent of the market at FFrs 41m in 1975, but over a 10-year period the trend has swung clearly upwards. In the ball bearings sector, for example, East German sales had more than doubled from 615 tonnes in 1968 to 1,500 tonnes in 1977.

Challenge

The French industry itself has had to respond to this challenge from overseas by rationalising and concentrating its efforts. In the past two years the contraction has been particularly severe, with employment in the industry cut back from 15,000 to 13,500. But before then the industry went through a long process of mergers and reorganisation which left it in the hands of six main companies.

The most important of these groups is SKF France which has absorbed many smaller companies in the last 15 years to emerge as a company with diversified interests in France across the range of bearing products. Its factories are concentrated in the Paris region, though it also has interests in Tours and in the Jura area of eastern France.

The second largest French bearings company is SNR. SNR's speciality is [illegible] sealed bearings, which account for about 40 per cent of its output, and it has a natural bias towards motor industry applications. But its products are also fairly widely spread against the range of bearings. The company employs over 4,000 in its five plants and has a turnover of about Frs 500m a year.

Behind these two leading groups comes a clutch of four other companies with a significant presence, and then a number of small operations employing only handfuls of workers. The four are Roulement Nadella, a company based in the Paris region making needle bearings only; Timken France, a subsidiary of the big American group, specialising in taper roller bearings, which is based at Colmar in Alsace and competes in its product with SKF and SNR; INA Roulement, another needle bearing manufacturer which is an affiliate of the German company of the same name and is also based in Alsace; and SNFA, the Societe Nouvelle de Fabrication Aeronautique, which is a specialist in the aircraft industry.

All these companies at the moment seem to be suffering from the general stagnation of the market. "The optimists think we can recapture this year a

CONTINUED ON NEXT PAGE

The U.S.

Record of steady growth

ALL AND roller bearings manufacture in the U.S. is an analogue for many another American industry these days. Total shipments have enjoyed steady but unspectacular growth over the last six years, some of its principal names are subsidiaries of larger corporations, product development has been just about adequate and some of its basic markets have been well penetrated by imports, particularly from Japan.

The growth in total shipments has been at an annual compounded rate of 8.4 per cent since 1973 and, according to the U.S. Department of Commerce, they were worth $1.63bn last year, 7 per cent more than the year before. The Department is projecting a similar rise in value for 1979, which may not be far off the mark even if the economic downturn predicted by many private economists actually occurs. Though not immune from cyclical trends, about 75 per cent of total shipments go to original equipment manufacturers and the balance in replacement supplies to the so-called after-markets. A decline in the fortunes of the automobile industry will be more than offset by the strength of demand from the railway equipment and capital goods sector.

With the outlook for U.S. inflation so uncertain, the Department has switched to constant dollars when making its longer-term forecast for the industry's shipments, which are expected to grow at a compound average rate of 2 per cent until 1983.

Behind these figures are a number of companies which are expressing themselves satisfied with market prospects and the achievements of the past year. One of the most successful, Timken, based in Ohio, has built a dominant position worldwide in the manufacture and marketing of tapered-roller bearings.

Largest

With its 1978 sales expected to have exceeded $1.1bn, Timken is by far the largest U.S. bearings manufacturer. In the last ten years, its sales have more than tripled and although falling margins have not brought a fully equivalent growth in earnings Timken is generally credited with a management shrewdness which has enabled it to beat off a series of competitive challenges. Its hold on nearly 85 per cent of the U.S. market for tapered-roller bearings is based on sound technology (Timken has one of the industry's two large research and development departments) and the advantages of an integrated manufacturing operation from which the company supplies almost all its own steel requirements. Strong complaints from Timken prompted U.S. Government restrictions in the early 1970s against cut-price imports of tapered-roller bearings from Japan. Among smaller domestic U.S. companies, Torrington, a subsidiary of Ingersoll Rand, and Brenco (sales $50m plus) are credited with keeping Timken on its competitive toes.

But its strength in a wide number of markets—automotive, rail equipment and capital goods—is generally seen as providing a cushion against the economic cycle which is further augmented by highly-profitable operations overseas, principally in Britain, France and Brazil. Altogether these provide about 26 per cent of the company's pre-tax income.

Some analysts believe that a proportion of Timken's business with the automotive industry may be threatened by a new development made by New Departure - Hyatt, General Motors' bearings manufacturing subsidiary. GM does not reveal what proportion of its total requirement is drawn from its oddly-named subsidiary, formed from a combination of two companies in 1965. However, accompanying the automotive giant's plans to produce an increasing number of four-wheel drive cars has been a new departure — Hyatt's recent announcement of an integral ball bearing spindle specifically designed to be fitted to front-wheel drive cars.

New Departure-Hyatt has hailed its creation as a "revolutionary product," following eight years of engineering development and millions of miles of testing. The company says that its spindle is a totally integrated assembly to replace the tapered-roller bearing and is pre-adjusted, pre-lubricated and sealed. The company also claims that the spindle will reduce the weight of the wheel mounting, improve durability, reduce rolling friction and eliminate the need for adjustment. After allowing for hyperbole, there seems little doubt that it has developed a component which is going to be of considerable interest to General Motors' rivals and which may lead to rival versions from other bearings manufacturers.

One, SKF Industries, the North American subsidiary of AB SKF of Sweden, claims that it developed an integral spindle for automotive use before the General Motors company. At the moment SKF in Europe is trying to sell the spindle to a number of European manufacturers of front-wheel drive cars.

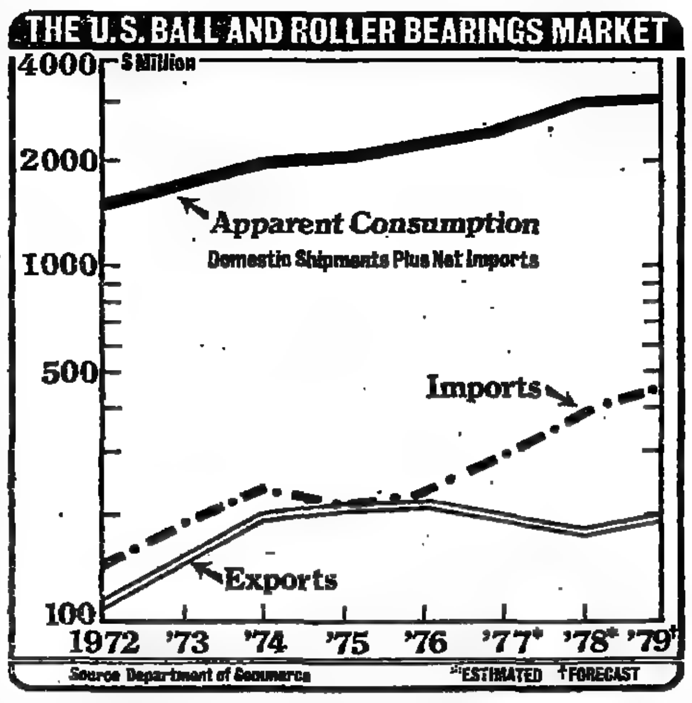
SKF Industries has been established in the U.S. since 1908 and now has six manufacturing plants and annual sales, of almost the full range of SKF bearings, worth about $250m. In the last ten years acquisition by SKF of two smaller U.S. companies, Tyson and Nice, has attracted the opposition of the Federal Trade Commission, which also took exception to a marketing arrangement between SKF and Federal Mogul which draws about half of its $560m annual sales from bearing manufacturers. Part of the arrangement between the two companies involved SKF supplying Federal Mogul with tapered-roller bearings after the latter had decided to cease manufacturing them. Following a recent court decision, SKF so far has won its case for retaining Tyson and Nice, but the SKF-Federal Mogul was declared improper. SKF is appealing against this decision while the commission is pressing ahead through an appeal to try to force the sale of Nice.

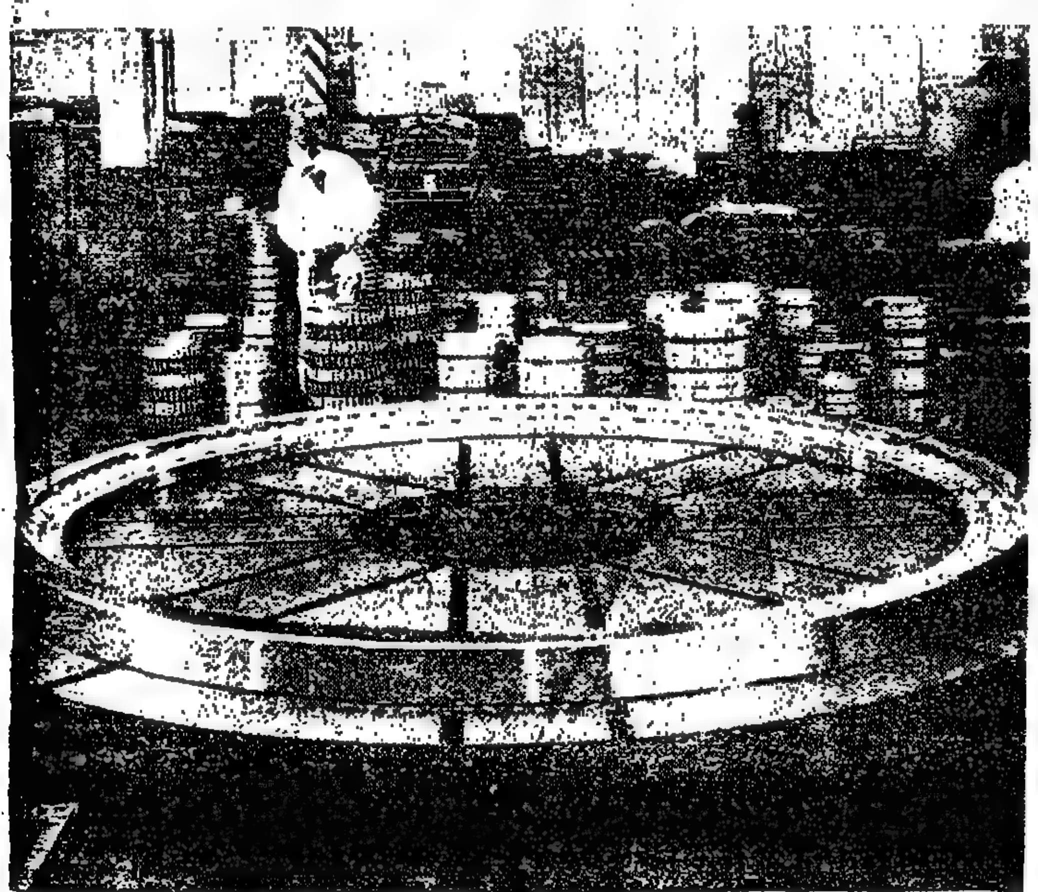
Swelled

Since 1970, the ranks of foreign bearings companies manufacturing in the U.S. have been swelled by the addition of three Japanese companies: NTN, which is in Chicago; Koyo Seiko, which has a plant in South Carolina; and NSK. West Germany's FAG also has a U.S. plant, in Joplin, Missouri. Nevertheless, foreign companies are importing far more bearings into the U.S. than they are manufacturing locally and their impact has been felt most keenly in the market for small-sized bearings.

A number of companies, including New Departure-Hyatt and Fafnir, a subsidiary of Textron Inc., came under some pressure from imports in the early 1970s, but the imposition of special duties on certain products reduced the growth in value of imports between 1974 to 1977 from $234m to $287m. Last year, however, the removal of the special duties was followed by a leap in imports to $390m, or 14 per cent of total shipments. The Department of Commerce anticipates a further 15 per cent growth, to $450m, in the value of imports this year. However, these gross figures mask the fact that imports have captured as much as 30 per cent of the market for some categories of small bearings.

John Wyles





A crossed roller bearing with an outside diameter of 111 inches, the largest manufactured by British Timken.

Deficit

CONTINUED FROM PREVIOUS PAGE

...le of the ground we have lost," says an industry economist. "But there is no doubt that we have gone through a difficult patch and the results of the big companies are very negative."

During the past three years, in fact, the industry has not increased its turnover fast enough to keep pace with inflation. Between 1976 and 1977 it went up by only about 8 per cent, from FFr 1.6bn to FFr 1.74bn. Tonnage output moved up sharply in these years, from 43,000 tonnes to 47,000, thus illustrating the main French anxiety about prices: the increased volume is not leading to increased turnover and profits.

The French bearings manufacturers—like most of the engineering sector—have made efforts to make up for these difficulties in recent years by selling more overseas. But they have not been quite able to match the increasing pressure from importers.

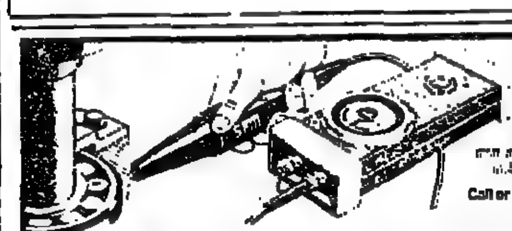
In 1975, for example, the French managed a positive balance on their bearings trade, selling FFr 722m overseas and importing products worth FFr 700m. A much poorer performance in 1976, when exports slipped from 26,000 to 23,000 tonnes, saw trade dipping deeply into deficit, with FFr 822m of imports against FFr 733m of exports. There was a slight recovery last year, but the negative balance remained, with imports at FFr 948m against exports of FFr 922m.

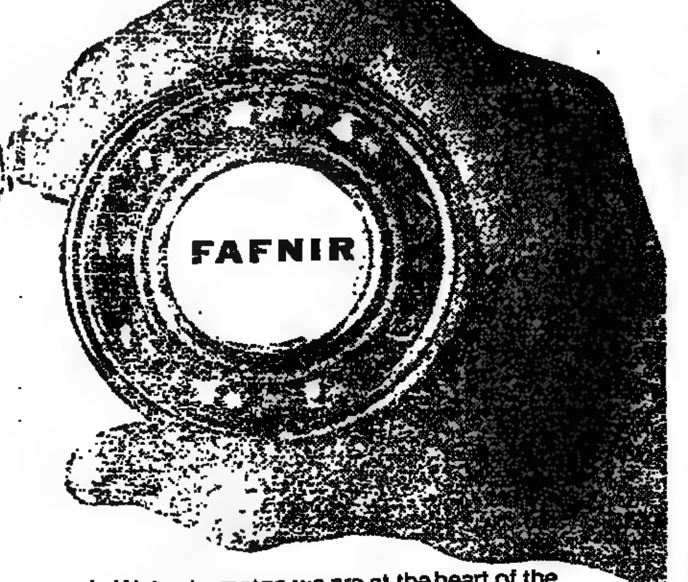
Among these exports, the French note that they make virtually no impression on Japan: sales to Japan in 1975 amounted to FFr 978,000 and 36 tonnes. By 1977 they had slipped to 5 tonnes worth FFr 48,000.

Given the present outlook for French industry, which seems to be heading for a slight upswing this year, the bearings manufacturers feel they have some hope of achieving an improvement. But they insist that expansion can only be successful if accompanied by satisfactory pricing policies based on fair competition.

The industry argues that it has done a great deal to rationalise itself in recent years and develop the sort of international profile which the Government seeks in its industrial policy. It now feels that this needs to be backed up by measures to put it on a safer footing in competition with its overseas rivals.

Terry Dodsworth





Japan

A painful adjustment

THE JAPANESE manufacturers of ball and roller bearings are in the throes of a painful adjustment to a period of slower economic growth in which the opportunities for increasing exports from Japan are limited both by the yen's appreciation and by protectionist pressures in major overseas markets. Steps being taken to meet this new situation include a greater emphasis on non-bearing products, such as machinery and automotive components, and a switch from direct exports of bearings to overseas manufacture. The supply of complete bearing plants, notably in Eastern Europe, is another part of the strategy for recovery.

As in TV sets and perhaps eventually in passenger cars, much will depend on whether the Japanese ball bearing manufacturers are able to reach the same levels of manufacturing efficiency and product quality in their European and North American plants as they have achieved in Japan. In most industrial countries they are up against strong local competition and it will not be easy to increase their market share. But it is certain that the Japanese companies will remain a significant force in the world bearings industry.

Japanese production of ball and roller bearings is dominated by four companies—Nippon Seiko KK (usually known as NSK), Koyo Seiko, NTN Toyo Bearing and, smallest of the four, Nachi-Fujikoshi. In the period up to 1973 their growth was based mainly on rapidly increasing demand from domestic user industries, particularly the motor industry which takes about 30 per cent of total production. While they had always been highly competitive exporters, especially of the smaller-size bearings, a big surge in overseas sales took place after 1973 as some manufacturers sought to maintain their production at pre-1973 levels.

An aggressive approach to exporting by the Japanese coincided with a period of low demand, excess capacity and weak prices in Europe and North America. An anti-dumping complaint was filed by the European manufacturers and, although the Japanese signed an undertaking to raise their prices, provisional anti-dumping duties were imposed. The subsequent legal action, still unfinished, is described in a separate article on this page, but the effect of the price increase was to put a sharp brake on Japanese bearing sales in Europe: indeed, they were faced with large stocks which took a long time to clear.

The impact of the more difficult trading conditions can be illustrated by the financial results of Koyo, which had been exporting nearly 30 per cent of its production and had about 88 per cent of its business in bearings: it is especially dependent on sales to the motor industry. In the year ending March 1978 Koyo made an operating loss of Y2,352m (about $11m) on sales of Y101,482m ($461m): another big loss is expected in the year ending next month.

Throughout the industry there has been a drive to cut costs, reduce inventories and develop new products. NTN has been able to reduce its operating loss in successive half-years from Y1,343m in the first half of 1977-78 to Y841m in the second half and Y364m in the first half of 1978-79 (April-September): with the help of property sales the net loss in this latest period was cut to Y30m. At the same time NTN has been increasing its sales of constant-velocity joints for front-wheel-drive cars. NTN has been exporting about 23 per cent of its output and has some 77 per cent of its business in bearings.

SALES PERFORMANCE 1974-77
(ball and roller bearings, including parts)

	Total deliveries	Exports			
	Value (Y100m)	Value (Y100m)	As % of deliveries	To EEC (Y100m)	To U.S. (Y100m)
1974	3,007	892	29.7	221	277
1975	2,914	1,045	35.9	314	245
1976	2,766	931	33.7	276	252
1977	2,873	780	27.1	178	243

All three leading companies have had to cut back the volume of their bearings exports. NSK, whose biggest export market is Western Europe (taking about 29 per cent of total exports), followed by North America (18.4 per cent.), reported a 27 per cent drop in exports in its 1977-1978 financial year. This company has not suffered losses in the post-1973 period, partly because it had a lower export proportion than the other two and partly because it was quicker to adjust its output to the reduced demand. Net income after taxes fell from a peak of Y2,716m in fiscal 1973 to Y1,050m in fiscal 1975, but had recovered to Y1,792m by fiscal 1977: a further improvement is expected in fiscal 1978, ending on April 30, 1979.

NSK's total sales in 1977-78 amounted to Y123,628m, of which 67 per cent consisted of bearing products. The company is seeking to diversify its product range and recently established a joint venture with Kayaba Industry to make power-steering systems.

The company's long-range policy on overseas operations, as stated by the president, Mr. Masao Hasegawa, "will be to continue to stress having overseas subsidiaries with a firm base in the economies of the host nations, both to contribute to economic development in those nations and to minimise the effects of currency fluctuations."

NSK's Brazilian plant was set up in 1972. In the following year the company set up a joint manufacturing venture in the U.S. with Hoover, which had been an important customer for Japanese-made bearings for a number of years. Since 1975 the three American plants have been wholly owned by NSK (though Hoover remains a substantial customer) and account for the bulk of the company's sales in that market. In Europe, NSK had been considering the possibility of a factory in the UK since 1971 and, despite opposition from local manufacturers, decided to go ahead with a new plant at Peterlee, Co. Durham, which started production in 1976. This plant is now working on three shifts and is producing about 1.6m bearings a month; last year about 80 per cent of its production was exported, mainly to Continental Europe.

Although Koyo has a manufacturing facility in the Netherlands, NTN in Germany and Nachi-Fujikoshi in Spain, the bulk of Japanese bearing sales in Europe are supplied from Japan. But the declining profitability of direct exports almost certainly will lead to greater investment by the Japanese companies in overseas production. These local plants normally will be supported by wholly-owned sales subsidiaries; NSK, for instance, has its own sales companies in the UK, Germany, France, the Netherlands and Italy and has been investing in computerised warehouses to improve delivery and service.

European selling prices of most Japanese bearings have increased substantially over the past 18 months—by as much as 40 per cent in some cases—and the Japanese manufacturers are as anxious as their European rivals to see the higher prices stick. As with any high-volume, capital-intensive business there is always a temptation to keep plants running at full blast by cutting prices to the bone, but the Japanese are not the only ones to succumb to that temptation. They argue that in the past year or so the low level of prices in Europe has been caused partly by the determination of certain European companies to maintain or expand their market shares.

The Japanese are also concerned, like the British and Continental companies, about the low prices being quoted by East European suppliers. Whether this awareness of a common threat will help to dispel the chill in relationships between European and Japanese bearing manufacturers remains to be seen. But it is quite clear that the Japanese companies, through quality and service as much as price, have established a position in the European market from which they are unlikely to be dislodged. As they strengthen this position with local manufacture, they should eventually come to be accepted as part of the European industry.

Geoffrey Owen

The dumping battle

BETWEEN 1974 and 1978 Japanese sales of bearings to the EEC countries increased by 40 per cent, reaching a 17 per cent market share. It was claimed that this was achieved by charging up to 32 per cent less than European manufacturers. The EEC adopted anti-dumping measures in 1977 and these led to a long legal contest between the Japanese ball-bearing manufacturers and the EEC Council and Commission. The litigation is now drawing to its close and the European Court's judgment is expected shortly.

On February 14 Mr. Jean-Pierre Warner, one of the European Court's Advocates General, presented his Opinion on the five actions which Japanese makers, their European subsidiaries and one agent brought against the council and the commission. The companies asked the court to annul the anti-dumping measures which the Community adopted in 1977 and to award them damages for loss which they claim to have suffered as a result of these measures.

Mr. Warner found the Japanese applications to be largely justified though the Court may or may not accept his opinion. Mr. Warner also proposed that the Council and the Commission should pay two thirds of the legal costs and that the Federation of European Bearing Manufacturers Associations should contribute the same proportion of costs caused by its intervention.

Clumsiness

It appears that the EEC has shown an extraordinary clumsiness in handling this matter. Mr. Warner proposed that the court should declare void Council Regulation No. 1778/77 which imposed a definitive suspended anti-dumping duty of 15 per cent. In his view the basic rules contained in Council Regulation No. 459/68 did not create powers for the Council to impose a suspended duty after the commission accepted as satisfactory the exporters' undertakings to raise prices by 20 per cent. Still less justification could be found for a suspended flat rate countervailing duty intended to ensure observation of the undertakings given by Japanese exporters.

In Mr. Warner's view this was an instrument so blunt as to be entirely incompatible with Article 19/3 of Regulation 459/68, which requires that the countervailing duty should correspond to the difference between domestic price and the dumping export price. By stipulating suspended duty at a flat rate of 15 per cent the regulation gave the Commission only the choice between a 15 per cent duty or nothing. In Mr. Warner's opinion it was not flexible enough to enable the commission to satisfy the requirement of Article 19/3. The flat rate made it impossible to take into account the actual degree of dumping and to differentiate between products sold at different prices.

Mr. Warner also agreed with the complaining companies that the Commission and Council were off-side in respect to a number of procedural rules. In particular the Commission should have told the companies how its investigators calculated the alleged difference between Japanese domestic and export prices. Nor did the Commission give the four leading Japanese bearing manufacturers an opportunity to make use of their right to be heard.

The Commission's investigations of Japanese prices in Europe were also incomplete: the commission left two-thirds of Nachi-Fujikoshi's imports out of consideration.

On the other hand, Mr. Warner did not find the Japanese claim for compensation justified. The Japanese companies did not suffer any damage by the imposition of the suspended duty, he argued. Any damage or loss which they have suffered must be traced back to their undertaking to increase prices. This was a voluntary undertaking and though the Commission's negotiators may have put pressure on them to make it, he did not think that one could speak of duress justifying a claim for damages.

The Japanese companies never admitted the existence of dumping. They insist that their undertaking to increase prices by 20 per cent was made solely to avoid the import duty which the Commission threatened to impose.

The Japanese companies argued also that the commission was inconsistent and impossible to please. It earlier attacked as contrary to EEC competition law their undertaking to increase prices in France which they gave in 1972 as part of an agreement with the French bearing industry. But Mr. Warner thought there was no inconsistency because a private agreement infringed the anti-cartel rules of the EEC Treaty but legislation did not.

Claimed

Of the five actions four were brought by the principal Japanese ball-bearing producers and their European subsidiaries: Nachi Fujikoshi, Nippon Seiko, Koyo Seiko and NTN Toyo Bearing. The fifth is by the Import Standard Office, the exclusive agent of Nachi in France. The Council and Commission claimed that none of these actions was admissible because the regulations were a legislative action and not decisions directly concerning individual rights. Mr. Warner found the objection of non-admissibility justified only in respect of the French agent of Nachi, the Import Standard Office, whose interests were not affected directly.

The dispute, which can be traced back to the 1972 French-Japanese ball bearing agreement, flared up when the EEC imposed a provisional anti-dumping duty of 20 per cent by Regulation 261/77 of February 4, 1977. This obliged importers to provide bank guarantees to cover this duty. Subsequently, a definitive duty of 15 per cent was imposed by Regulation 1778/77. The Commission then made moves to collect this duty for the period between February 4, 1977 and August 3, 1977 when the Japanese companies' undertaking to raise prices was accepted. Opposing this move the Japanese companies asked the court for an interim measure of protection, suspending the payment of these amounts.

Applications

The European Court had by that time already received the applications attacking Regulation 1778/77 and on November 3, 1977, Dr. H. Kutscher, the court's president, granted the Japanese companies a stay of the payment order. He said that the Japanese exporters need not pay the EEC countervailing duty until the court had dealt with their main actions directed against the validity of the measures taken by the council and the commission.

Trade disputes with Japan are often settled by a Japanese undertaking to observe self-restraint in the volume of exports or to raise prices. The imposition of a flat rate suspended duty to ensure observance of a Japanese undertaking on the very day when the undertaking was accepted as satisfactory by the commission was certainly a novel procedure.

Whatever the reason for the commission's over-enthusiastic approach, it did not seem to produce a legal instrument suitable for the purpose. Fortunately, if the Court now agrees with Mr. Warner and declares the regulation void, nothing much will be lost. The Japanese companies have so far observed the undertaking which they gave in 1977 and there is no serious doubt that they intend to continue to do so for the time being. Nothing has been heard, so far, about any new investigation planned by the commission. So the Japanese ball-bearing [illegible] seems to be just another of those Luxembourg litigations in which both parties try to prove that they were right, without expecting any great material benefit from the result.

A. H. Hermann

GLC boost for world commodity centre

BY JOHN EDWARDS, COMMODITIES EDITOR

THE GOVERNMENT is expected to announce a decision this week on the financial support it is prepared to give for a World Commodities Centre in London.

This follows the announcement by Mr. Horace Cutler, leader of the Greater London Council, that the GLC was prepared to consider investing £50,000 in the proposed Centre. This offer, Mr. Cutler, explained as a "match to light a firework" — to try to bring a conclusion to the protracted negotiations that have taken place in trying to persuade Whitehall to make a decision.

Mr. Cutler said that the proposed contribution would be a worthwhile investment to help ensure that London remained the financial centre of Europe and the world. It was viewed as part of the overall policy of attracting life and business to London to improve the financial base and employment opportunities.

A world centre would help to ensure that commodity organisations stayed in London. He hoped that the Government and the City would show a similar enthusiasm in backing a project that would boost London's role as an international market place.

The GLC offer comes in response to an appeal for funds to back the World Commodities Centre project. The idea, launched in January 1976 by the Parliamentary Group for World Government, is that the Centre should provide better facilities for international commodity organisations.

It is feared that without the provision of better facilities these organisations may be tempted to go elsewhere and weaken Britain's present dominant position as an international commodity trading centre.

The organisations are estimated to produce directly some £2m a year for Britain, and another £100m through the administration of buffer stock funds. The London commodity markets themselves produce some £200m a year in invisible earnings.

It is calculated that more than £6m will be needed to provide the extra con—ference facilities required over and above the actual cost of the site for the proposed Commodities Centre. Funds for purchase of the site would be raised by normal financial means.

City institutions are being asked to agree in principle to contribute £3m into a company that will be formed as a vehicle to finance the Centre. The initial capital would be supplemented by borrowing on a long-term basis with mortgage of the Centre as security.

The pre-conditions to institutions taking up shares in the proposed company are that the Government provides an amount not les than that raised from City sources; that the International Commodity Organisation commit themselves to occupation of the office premises and that it can be shown the project is finacially vialble.

Stockpile sales bill planned

By Our Commodities Staff

Washington — Legislation authorising the sale of raw materials from the U.S. strategic stockpile will be introduced in Congress possibly by Friday, according to Administration officials reports Reuter.

The legislation to be proposed by the Office of Management and Budget will come into effect, if passed, in the 1980 fiscal year beginning on October 1.

The officials said that draft legislation has been completed calling for stockpile acquisitions estimated at $177m and disposals of between $230m and $250m.

In Geneva meanwhile the U.S. tabled proposals for a possible copper price stabilisation agreement, built around a reserve buffer stock of at least 1m tonnes.

U.S. delegate, Mr. Richard Ogden said a buffer stock of at least that level was needed to ensure a reasonable degree of price stability

The price band should be wide enough to moderate cyclical price movements without interfering with seasonal or day-to-day fluctuations, he said.

● Prices finished generally lower on the London Metal Exchange yesterday after fluctuating widely during the day. Copper cash wirebars closed at £995 a tonne, down £7.5 on the day. Silver was marked down 13.7p at 370.0p an ounce at the morning fixing on the London bullion market but by the close the LME price had recovered to 375.15p an ounce for a net fall of 2.15p.

UK FISHING INDUSTRY

Plea to restrain fleet expansion

BY RICHARD MOONEY

THE GOVERNMENT should take steps to curb the uncontrolled expansion of the UK fishing fleet's catching capacity, Mr. Charles Meek, chairman of the White Fish Authority, said in London yesterday.

He was particularly concerned about the growing number of super-efficient purse seine vessels in the fleet. These vessels encircle fish with a net, the top and bottom of which are then closed. The method is "devastatingly efficient" for catching pelagic (free swimming) fish, a WFA spokesman said.

As distant water fishing opportunities have been closed off and coastal water stocks have declined some vessel operators have responded by intensifying their fishing efforts through the employment of bigger and more efficient boats, Mr. Meek said.

The WFA and the Herring Industry Board have been able to exercise some control over the size and constitution of the fleet through their administration of grants of up to 25 per cent for the building of new vessels.

"In the past couple of years that control has been slipping away from us, and the consequence has been that we have an accelerating accretion of additional catching power at the time when all the evidence tells us that the opposite should be happening," Mr. Meek said.

In an effort to check this trend Mr. Meek warned vessel owners that they could not expect grants for vessels purchased without the Authority's consent. But this failed to check the inflow and WFA figures, which are by no means complete, show that another 86 vessels—mostly second-hand—have been imported in the past year, many of them from Norway.

"That figure has increased by a couple of dozen even in the past month," the WFA chairman said.

In addition vessel owners have on order another 20 purse seiners which will increase Britain's fleet of these vessels to 60 by the end of this year. "Such is the power of the purse seine technology that this represents a further tremendous increase in catching power," Mr. Meek warned.

The purse seine technique, developed in Norway, was introduced into Britain in the mid-1960s. By 1977, 27 British vessels—all but one of them operating from Scottish ports—were using purse seine nets, which cost up to £70,000 each. The vessels also use specialised hauling gear which cannot be adapted to other fishing methods.

The clearest indication of the effect of this enlargement of catching power, Mr. Meek said, has been the enormous effort concentrated on the West Coast mackeral grounds which has forced the Government to ban mackerel fishing between March 10 and June 2.

If nothing is done extra vessels will continue to be added to the fleet making the orderly re-structuring of the industry virtually impossible and fisheries management will become much more difficult, the WFA chairman added.

But he could offer no simple solution. "The introduction of a restrictive licensing scheme could be the answer but such a scheme would be extremely difficult to design and administer."

As a first step, however, he thought the Government should grant licences to all vessels currently fishing or on order. This step would be administratively simple and could be taken quite quickly, he said. Such a move, apart from laying the groundwork for the eventual introduction of a restrictive licensing system, would make owners think twice about ordering new vessels since it would imply a preference for vessels already in the fleet.

As an alternative, Mr. Meek suggested that Mr. John Silkin, the Agriculture and Fisheries Minister, could make a statement warning the industry to be wary of bringing in new vessels without official approval.

"It is high time that Government officials and industry representatives were putting together the framework for a licensing scheme." Mr. Meek said. The WFA, which already has considerable experience of dealing with fishermen, would be the ideal body to administer the scheme, he added.

Mr Meek said overcapacity was the most immediate problem facing the UK fishing industry. But the question had been "largely overlooked" in view of the difficulties surrounding the negotiation of a new EEC Common Fisheries Policy.

Fleet expansion was being undertaken by the "crack men," who were confident that they could be profitable and many smaller traditional fishermen could be forced to the wall.

France wins manioc battle

BY CHRISTOPHER PARKES

FRANCE HAS won a major battle in its campaign to cut Common Market use of cereal substitutes in animal feeds.

The EEC cereals management committee's decision to eliminate monetary compensatory amount taxes and subsidies on manioc products, used as cheap grain substitute, is almost certain to stop all imports into the British market.

The loss of the subsidies, expected to take effect in mid-April, will mean that manioc-based cereal replacers will no longer be competitive and feed makers will be forced to switch back to barley and wheat.

One leading feed manufacturer said the decision would probably increase demand for grain in Britain this season by between 100,000 and 125,000 tonnes.

However, traders said, the effects of the committee's move on the grain market had already been taken into account since plans for action were well known. Barley futures prices actually fell slightly yesterday.

"It had all the impact of a feather duster," said a spokesman for the feed makers' association, UKASTA.

Compounders had taken advantage of the cheap imports while they were available, but most had recognised that in view of French antagonism some action was inevitable.

At present the MCA subsidy on replacer pellets sent from Germany to the UK—generally a mixture of manioc and protein ingredients—is worth up to £32 a tonne.

German and Dutch processors of manioc will be the first to suffer from the changes which will probably cost them valuable export markets in France as well as the UK.

Record tea crop in India

BY K. K. SHARMA IN NEW DELHI

TEA PRODUCTION in India during 1978 reached a record 571.1m kilos, an increase of 10.3m over the previous year, according to the United Planters' Association of Southern India.

This was possible because of the harvest of 130.2m kilos in South India which is close to the record of 1977.

There was also an impressive increase of 11.3m kilos in North India where output reached 440.9m kilos.

Latest information available to the Association suggests that the world crop in 1978 can be placed at around 1bn kilos, an increase of about 12m kilos over 1977.

Colombian coffee prices adjusted

By Our Commodities Staff

COLOMBIA HAS lowered internal coffee prices and taxes. The buying price is down 12 per cent, while the retention tax is reduced from 80 per cent to 45 per cent, Sr. Arturo Gomez, manager of the National Coffee Producers' Federation, announced in Bogota yesterday.

The new internal buying price is 6,400 pesos (£78) per 125 kilo load compared with the 7,300 pesos price in effect since May 27, 1977.

NZ offered cheese quota

BY CHRISTOPHER PARKES

COMMON MARKET negotiators involved in international trade talks in Geneva have been authorised to offer New Zealand access to the British market for between 7,000 and 8,000 tonnes of cheddar cheese a year.

New Zealand delegates at the talks, held under the auspices of the General Agreement on Tariffs and Trade, are asking to be allowed to send 20,000 tonnes annually.

Meanwhile, Mr. John Silkin, UK Minister of Agriculture, has written to British food and farming industry lobbyists telling them he intends to stand by New Zealand's claim to continue selling dairy produce in the British market.

His letter was a private response to the Food and Drink Industries Council, the Milk Marketing Board and the National Farmers' Union, which had written to him asking for action to keep NZ cheese out of the UK.

They argued that to allow imports would damage the British cheese industry which is just beginning to recover from the difficulties caused by overcapacity in factories.

New Zealand cheddar was last imported into Britain in 1977. In the past year the belief has grown in the trade that access would eventually be granted under the GATT for between 10,000 and 15,000 tonnes.

As a quid pro quo in the complex negotiations, the EEC is expected to be allowed to ship a similar amount of soft cheeses into the U.S.

Meanwhile, in London yesterday, Mr. Charles Hilgendorf, chairman of the New Zealand Meat Producers' Board, came under fire for making "ill-advised and misleading" statements about the condition of the British lamb market.

On these "misunderstandings" the meat board had taken action to prop up prices by ordering importers to hold imported lamb off the market, the Imported Meat Trade Association said yesterday. The action was short-sighted, the Association charged.

"The important thing now is to permit and encourage increased UK consumption in order to re-establish New Zealand lamb as a regular quality item in high street shops and to move on from there," it said in a statement.

The British trade was responsible and experienced and accustomed to dealing with price reductions which in any case occur regularly around this time of year, the statement added.

Indian jute settlement will raise costs

By Our Own Correspondent

THE 49-DAY-OLD jute strike—the longest in the Indian industry's recent history—which has just been called off has cost the industry 185,000 tonnes of jute goods in production.

The settlement with the workers will cost in a full year Rs 240m (£15m) which will raise the production cost by Rs 250m a tonne.

Mr. K. K. Kanoria, chairman of the Indian Jute Mills Association, has said that the Indian jute market will soon become uncompetitive unless it is subsidised by the Government.

Observers, however, say that Indian mills will be getting adequate export orders for the time being as the Bangladesh jute industry appears to be heavily overbooked.

BRITISH COMMODITY MARKETS

BASE METALS

COPPER—Lost further ground on the London Metal Exchange but finished above the day's lowest levels. After opening at £1,003, forward metal fell to £994 on the pre-market. Following the overnight trend in the U.S. However, short covering developed below the £1,000 level and ...

Amalgamated Metal Trading reported that in the morning cash wirebars traded at £990, 90, 89.5, 89, three months £994, 95, 95.5, 96, 97, 1,001, 1, 2, 3, 4. Cathodes, cash £982, three months £990, 89.5. Kerb: Wirebars, three months £1,004, 3.5, 3, 2.5. Afternoon: Wirebars, cash £1,000, three months £1,015, 16, 15, 14, 13.5, 13, 14, 13.5, 13, 12, 11. Kerb: Wirebars, three months £1,010, 9, 8, 7.5, 9, 10, 9.5, 10, 11, 12, 13, 14, 13, 15, 13, 12, 11, 11.5, 10.5, 10. Cathodes, cash £990.

TIN—Slightly easier. A fall in the Penang market and the initial weakness of copper saw forward metal open at £7,220 and fall to £7,170 on the pre-market. However, good buying against U.S. physical business developed at this level and with sellers reluctant the price rose to the day's high of £7,290 in the afternoon before closing on the late kerb at £7,240. Turnover 1,310 tonnes.

Kerb: ... Afternoons: Standard, cash £7,300, three months £7,250, 60, 55, 30, 20.

LEAD—Barely changed and moving in line with copper. Forward metal fell to around £500 on the early pre-market but thereafter recovered modestly to close at £507 on the late kerb. Turnover 17,225 tonnes.

LEAD	a.m. Official	+ or —	p.m. Unofficial	+ or —
	£	£	£	£
Cash	536-.5	-2.75	539-41	-.75
3 months	505-.5	-9	507.5-8	-.5
Sett'ment	536.5	-10.5	—	...
U.S. Spot	—	...	42.4	...

Morning: Cash £537, 38, three months £502, 3, 4, 5, 2.5. Kerb: Three months £503, 4, 3. Afternoon: Three months £506, 9, 10, 8, 8, 7, 8, 7.5. Kerb: Three months £506, 7.

ZINC—Slightly easier, reflecting the trend in other base-metals. Forward metal recovered from being £399 on the early pre-market to close a shade down on balance at £407.5. Turnover 11,225 tonnes.

SILVER

COCOA

SUGAR

COFFEE

RUBBER

GRAINS

SOYABEAN MEAL

WOOL FUTURES

MEAT/VEGETABLES

JUTE

COTTON

Index Limited 01-351 3466. Nov.-Dec. Rubber 67.8-68.3.
Lamont Road, London SW10 0HS.
1. Tax-free trading on commodity futures.
2. The commodity futures market for the smaller investor.

CORAL INDEX: Close 476-481

INSURANCE BASE RATES

† Property Growth	12%
† Vanbrugh Guaranteed	11.25%

†Address shown under Insurance and Property Bond Table.

PRICE CHANGES

In tonnes unless otherwise stated.

	Feb. 27 1979	+ or —	Month ago
Metals			
Aluminium	£710	......	£710
Free Mkt (cs)	$1,475/95	......	$1,370/60
Copper			
Cash w'bar	£995	-7.5	£871.5
3 mth	£1,015	-5.5	£890.75
Cash Cathode	£988	-7.0	£859.25
3 mth	£1,001.5	-9.0	£879.25
Gold troy oz	$247.625	-0.5	$235.875
Lead cash	£540	-0.75	£616
3 mth	£507.75	-0.5	£481.75
Nickel	£2520.69	......	
Freemkt(cif)(lb)	$2.02 2.15	.... -0.055	$1.80 1.72
Platin'm tr'y oz	£164.5	......	£170
Free mkt	£203.7	-3.25	£196.6
Quicksil'ver	$225.55	-6.5	$210.20
Silver troy oz	370.6p	-15.7	351.2p
3 months	381p	-14.5	340.p
Tin cash	£7,300	-25.0	£6,972.5
3 mths	£7,225	-30.0	£6,907.5
Tungsten	$127.94	......	$144.29
Wolfrm 22.04 cif	$139/46	......	$120/26
Zinc cash	£595.5	-1.5	£564.5
3 months	£409	-1.5	£576.75
Producers	$800	......	$760
Oils			
Coconut (Phil)	$990	-10	$990
Groundnut			
Linseed Crude	£415	-3.0	£565
Palm Malayan	$699x	-7.0	$640
Seeds			
Copra Philip	$675v	-5.0	$680
Soyabean (U.S.)	$310.65x	-4.65	$287
Grains			
Barley Futures	£94.55	-0.55	£90
Maize			
French No 3 Am	£109r	......	£110.5
Wheat			
No. 1 Red Spg.	‡	......	‡
No2 Hard Wint.	£88s	......	£87.5
Eng. Milling t	£98.6s	......	£96
Other commodities			
Cocoa ship't	£1,841	+12.0	£1,808
Future May	£1,811	-17.5	£1,782.5
Coffee Ft'r May	£1,558.5	+3.0	£1,369.5
Cotton 'A' index	77.25c	+0.6	75.6c
Rubber kilo	61.75p	-1.0	57.p
Sugar (Raw)	£105	-4.0	£93
Woolt'p's 64s kl	284p	......	268p

• Nominal. † New crop. ‡ Unquoted. p April-May. r Feb.-March. s March. v March-April. w April. x Per ton. z Indicator. § Buyer.

AMERICAN MARKETS

NEW YORK, Feb. 27.

Copper—March 90.40 (88.10), April 91.10 (88.80), May 91.90, July 92.35, Sept. 92.70, Dec. 91.80, Jan. 91.75, March 91.70, May 91.60, July 91.00, Sept. 91.40, Dec. 91.25, Jan. 91.20.

*Gold—March 249.20 (245.70), April 251.20 (247.70), May 253.40, June 255.80, Aug. 260.40, Oct. 265.10, Dec. ...

§Wheat—SCWRS 13.5 per cent protein content cif St. Lawrence 189.25 (189.85).

CHICAGO, Feb. 27.

Lard—Chicago loose 25.62 (25.50). New York prime steam not available.

Monday's closing prices

EUROPEAN MARKETS

ROTTERDAM, Feb. 27

Wheat—U.S. Northern Dark Hard Winter, 13.5 per cent, mid-Feb mid-March $163. U.S. Hard Winter wheat ordinary not offered. U.S. No. 2 Red Winter wheat April $159, May $158, June $146. U.S. No. 2 Northern Spring wheat, 14 per cent, March $174, April $169, May $147.50.

Maize—U.S. No 3 Yellow afl $122, Feb. $121.75, March $121.50, April-June $121, July-Sept. $120, Oct.-Dec. $121.50.

Rye—U.S. No. 2/Canadian Western unquoted.

Oats—U.S./Plate, Swedish Nor-...

... Jan. $286.75, Feb. $291, March $292 sellers. Brazil yellow FAQ unquoted: Brazil unquoted. Lakes unquoted. Argentine May $298.50, June-July $299.25 sellers. Quiet, tradeless.

Soyameal—44 per cent protein, U.S. March $229, traded afl, $241, Feb $246, March $240, April-Sept. $243, Nov.-March $229, sellers. Brazil Pellets afl $250, March $249, April $249.50, May $245.70, April-Sept $250.50.

PARIS, Feb 27.

Cocoa (FFr per 100 kilos)—March 1475-1489, May 1512-1514, July 1520 bid, Sept. 1562-1568, Dec 1565-1570, March 1620-1630. Sales at call 4. Accumulative total 94.

INDICES

FINANCIAL TIMES

Feb. 26	Feb. 23	M'nth ago	Year ago
268.07	270.27	261.61	225.22

(Base: July 1, 1952=100)

MOODY'S

Feb. 26	Feb. 23	M'nth ago	Year ago
1050.5	1056.9	1003.8	889.7

(December 31, 1931=100)

DOW JONES

Dow Jones	Feb. 26	Feb. 23	Month ago	Year ago
Spot	386.62	385.57	377.05	350.45
F'tur's	353.36	384.75	371.62	350.75

(Average 1924-25-26=100)

REUTERS

Feb. 27	Feb. 26	M'nth ago	Year ago
1560.0	1562.2	1503.7	1364.9

(Base: September 18, 1931=100)

PERSONAL

HOUSE EXCHANGE. Art-filled 3 bedroomer in Wellfleet, Cape Cod (100 miles from Boston), perfect for writer, painter, musician, etc., available for ... year from September '79 in exchange for flat or house in London. Write Box 1085, Wellfleet, Mass. 02667, U.S.A.

CLUBS

EVE, 189, Regent Street, 734 0557. A la Carte or All-in Menu. Three Spectacular Floor Shows. 10.45, 12.45 and 1.45 and music of Johnny Hawkesworth & Friends.

GARGOYLE, 69, Dean Street, London, W1. NEW STRIPTEASE FLOORSHOW "AS YOU LIKE IT" 11-3.30 am. Show at Midnight and 1 am. Mon.-Fri. Closed Saturdays. 01-437 6455

Boom conditions prevail as Government stocks rise £3 and equity share index advances 10.8 to 479.6

Account Dealing Dates

Option *First Dealings	Declarations	Last Dealings	Account Day
Feb. 12	Feb. 22	Feb. 23	Mar. 6
Feb. 26	Mar. 8	Mar. 9	Mar. 20
Mar. 12	Mar. 22	Mar. 23	Apr. 3

* "New time" dealings may take place from 9.30 am two business days earlier.

Backed by the recent relative strength of sterling, yields on Government stocks still well in excess of the levels ruling in other industrialised countries attracted further widespread foreign investment to the Gilt-edged yesterday. This in turn provoked renewed buying interest for a broad list of equities which, after a slightly hesitant opening, responded sharply and markets as a whole presented all-round boom conditions.

Encouraged by the unprecedented performance of the two new Government scrips since last Friday's debut, the enthusiasm of domestic and foreign buyers for Gilts impinged on a market acutely short of stock following the recent heavy off-take. Accordingly, yesterday's upsurge in quotations was quite dramatic and extended to over three points despite brief reactionary spells during the day.

The long Treasury 13¾ per cent 2000-03 stock jumped 3¾ points to £21⅞, which represents a premium of 6⅞ on last week's issue price of £15, while the short-medium issue Exchequer 13¼ per cent 1987 spurted 2½ to £20⅞. High-coupon longs settled with gains ranging to 3½ points, while the shorts showed rises of over 2 points and the FT Government Securities index advanced 1.89 to 69.94 for a gain of 8.2 per cent on its 1978-79 low recorded 13 business days ago.

All sectors of equities benefited from revived institutional support. Some particularly good business was transacted in leading shares including Glaxo, up 23 at 515p, and GEC, 9 higher at 346p, both following brokers' recommendations. Gains otherwise in constituents of the FT 30-share index, which staged its biggest single-day rise for over three months with a gain of 10.8 to 479.6, were rarely more than 8p.

Secondary industrials also went ahead impressively and the increased volume of overall trade was reflected in official markings of 6,606 against last week's daily average of 5,316; a month ago the average was under 4,000.

The Investment currency market opened firm and, in a reasonable two-way business, the premium rose to 93 per cent. With dollars around from arbitrage sources, however, the premium eased to close at 91½ per cent for a fall of 1½. Yesterday's SE conversion factor was 0.5699 (0.5581).

For the second day in succession, the Traded options market attained a record number of contracts with 1,865 deals being recorded against Monday's 1,610. A high level of activity was again seen in Grand Metropolitan which attracted 336 trades, while other active issues included ICI with 302 and GEC with 211.

News that Comet Radiovision had increased its stake in the company to 24.5 per cent prompted increased speculative interest in Caledonian Holdings which advanced 10 to 141p; Comet's cash and shares offer, worth around 150p to counter London and Midland Industrial's bid worth 132p, was announced well after the close of the market.

NatWest jump

The major clearing banks remained in buoyant mood with NatWest reporting much better-than-expected annual profits; after touching 328p in response to the results, NatWest eased to 320p before rebounding late to finish a net 17 better at 327p; the Warrants gained 8 to 125p, after 126p. Midland, which conclude the dividend season on March 9, rose 10 to 388p. Elsewhere, higher preliminary profits and a proposed 50 per cent scrip-issue helped Hong Kong and Shanghai advance 17 to 296p, after 300p, but, in complete contrast, Grindlays ended 7 lower at 126p on disappointment with the results.

A better-than-expected result helped Commercial Union put on 5 to 154p, after 155p, while General Accident rose 10 to 212p in front of today's preliminary statement. Royals, with results due tomorrow, added a similar amount to 360p. Hambro Life improved 15 to 420p in a thin market and Brentnall Beard appreciated 4 to 36p.

A combination of brisk demand and stock shortage prompted several notable gains in Building issues. A couple of pence firmer for most of the session, Blue Circle ended 15 up at 272p in a late spurt, while steady demand lifted RMC 7 to 147p. Recently lethargic Costain issues picked up, the ordinary adding 10 to 166p and the deferred 6 to 121p. In strong Timbers, Montague L. Meyer put on 4 to 93p, International 6 to 123p, and Magnet and Southerns 8 to 158p. Elsewhere, BPB moved up 12 to 246p, while news that Ferguson Industrial Holdings had built up an 8.7 per cent stake in the company lifted Breedon and Cloud Hill Lime 4 to 134p.

Early interest resulted in a gain of 7 to 389p in ICI, while Fisons, annual results next Monday, rallied 12 to 315p. Among other Chemicals, Brent, in a thin market, added 13 to 238p, while gains of around 7 were marked against Leigh Interests, 130p, Plysu, 139p, and Stewart Plastics, 178p. On the other hand, the Monopolies Commission reference of Merck Incorporated 385p per share cash bid prompted further weakness in Alginate which slipped 10 for a two-day fall of 84 to 290p.

Stores came in for considerable support and generally closed at the day's best. Still reflecting a Press prediction that the forthcoming interim statement wil reveal first-half profits of around £10m, Burton A and Ordinary jumped 12 apiece to 233p and 255p respectively and the Warrants advanced 13 more to 90p. Gussies A put on 8 to 322p and British Home improved 6 to 184p, while Combined English added 5 to 118p. Renewed investment support lifted MFI Furniture 14 to 250p and Status Discount were prominent at 270p, up 11.

Trading in the Electrical sector was again brisk. Encouraged by a broker's investment recommendation, GEC were a particularly lively market in the leaders and closed 9 to the good at 346p. Demand persisted for many of the secondary favourites where gains were often accentuated by stock shortage. United Scientific were prominent at 282p, up 18. Rises of around 8 were recorded in MK Electric, 210p, Telephone Rentals, 160p, and Berec, 125p. Racal were actively traded at 406p, up 12.

Leading Engineers, a rather neglected market of late, saw some useful buying interest. Assisted by news that discussions are at an advanced stage for the acquisition of Crawford Russell, a private company based in the U.S., John Brown were in renewed demand and put on 12 further to 424p. Buyers also showed interest in Guest Keen, 7 to the good at 237p, and Vickers, which improved 4 to 178p. Interest in secondary issues broadened considerably and gains were fairly widespread. Braithwaite, a poor market recently, recovered 9 to 97p, while similar rises were recorded in Startrite, 145p, and Vosper, 202p. Metalrax responded to the good results and a proposed one-for-ten scrip issue with a rise of 3 to 56p.

Foods took useful improvements a stage further in late dealings. In the leaders, Associated Dairies stood out at 220p, up 14, while Rowntree Mackintosh added 13 to 388p. Certain secondary issues displayed useful improvements; William Morrison moved up 9 to 109p, while Carliers and George Bassett added 8 apiece to 122p and 126p respectively.

Outstanding upward movements in Hotels and Caterers included Grand Metropolitan, 5½ to the good at 129½p. Trust Houses Forte, 10 higher at 270p, and Ladbroke 6 up at 190p.

Glaxo rise

After a hesitant start, miscellaneous Industrial leaders rose sharply in sympathy with the fresh upsurge in gilt-edge securities. Demand was fairly persistent and with stock in short supply, double-figure gains were commonplace. Additionally helped by a broker's circular, Glaxo ended 23 to the good at 515p, while Unilever rose 20 to 582p ahead of next Tuesday's annual results. Reckitt and Colman added 15 to 487p and Beecham rose 10 to 643p, as did Pilkington to 297. Rank Organisation improved 5 to 253p and the new nil-paid appreciated 6 more to 32p premium. A nervous market of late, Booker McConnel rallied 14 to 272p despite a Press suggestion that the forthcoming results will be poor. Investment buying lifted ICL 14 to 494p, De La Rue 10 to 370p and Ricardo 23 to 335p. Fresh speculative buying helped Jacksons Bourne End put on 8 more to 148p, while Glass and Metal added 7 to 130p on hopes that further news regarding the bid approach is imminent. Improvements of around 6 were recorded in Brown Boveri Kent, 53p, Huntleigh, 79p, Valor, 66p, and European Ferries, 138½p. Sothebys, on the other hand, cheapened 5 more to 373p.

In the Leisure sector, Coral firmed 5 to 119p and Saga 9 to 204p, but further consideration of the interim results left Campari 5 off at 97p, after 94p. The managing director's bid denial clipped a couple of pence from Pleasurama at 116p.

Distributors again captured the limelight among Motor sectors, although some rises were exacerbated by shortage of stock. Heron remained firm, adding 11 to 124p, while Tate of Leeds rose 6 to 88p. Appleyard, 88p, Harold Perry, 126p, Lookers, 65p and Lex Service, 87p, all firmed between 3 and 5.

Leading Newspapers remained firm, Associated advanced 4 to 194p, while Pearson Longman closed 8 better at 222p. Elsewhere, poster advertising issues were firm with London and Provincial, 192p, More O'Ferrell, 87p, and Mills and Allen, 245p all rising around 5. Saatchi and Saatchi rose 9 to close at 166p following the chairman's cheerful annual statement.

The possibility of an early cut in minimum lending rate encouraged fresh demand for Property issues where MEPC added another 4 to 180p and Bernard Sunley gained 12 to 296p, while British Land hardened 2 to 56½p. English Property put on 1½ to 61½p, after 62p, on hopes of another bid from Wereldhave to counter Olympia and York Developments' latest 60p cash offer. Elsewhere, brisk support lifted Apex 11 to 103p and London and Provincial Shop 9 to 167p. Centrovincial issues also claimed a fair amount of attention, the ordinary rising 8 to 105p and the Capital shares 9 to 103p.

Oils improve

Oils came to life with quite a lively trade developing throughout the sector. British Petroleum edged higher to close at an all-time peak of £10, while buyers pushed Shell up 12 to 656p. Among the more speculative issues, interest revived in Siebens (UK) which advanced 10 to 290p.

Fresh demand was forthcoming for Trusts. Among the numerous gains, Rothschild stood out with a rise of 7 at 229p while in Income issues, Derby advanced 8 to 211p. Dealings in Fitzroy Investments were temporarily suspended at 20p at the request of the company.

Shippings took part in the general improvement. P and O deferred at 77½p, regained 1½ of the previous day's fall of 5 which followed reports that the company may sell some of its energy assets.

Institutional demand lifted Courtaulds 3 to 111p, while Cawdaw were also wanted and put on 3 to a 1978/79 peak of 37p.

Professional support left Tobaccos higher; Bats Ordinary closed 11 better at 320p, and the Deferred 8 up at 296p while Imps rose 3 to 89p.

Guthrie continued to benefit from speculation about an increased offer from Sime Darby and rose 12 for a two-day gain of 42 to 485p.

Golds fall afresh

South African Golds came under sustained selling pressure throughout the day reflecting the sharp decline in the bullion price to $245.70 in overnight U.S. markets, although the latter rallied in London to close 50 cents down at $247.625 per ounce.

Share prices were marked down at the outset, but selling pressure built up towards mid-day and lasted for most of the afternoon when heavyweight issues such as Hartebeest, £15, were left showing falls ranging to ½.

De Beers again held the limelight in South African Financials as renewed American buying in anticipation of the 1978 results, due on March 6, saw the shares surge a further 12 to 482p for a two-day gain of 22. Anglo American Corporation rose 9 to a 1978-79 high of 390p in sympathy with De Beers.

Elsewhere in South African Financials, "Amcoal" advanced 45 to a high of 875p following persistent and heavy Cape buying.

A downturn in overnight Sydney and Melbourne markets prompted minor falls in Australians with the exception of Western Mining and Thiess Holdings which ended with modest gains.

Adverse Press comment on the sale of its royalties from Western Mining's nickel production and sales caused a fall of 8 to 158p in Hampton Areas.

FINANCIAL TIMES STOCK INDICES

	Feb. 27	Feb. 26	Feb. 23	Feb. 22	Feb. 21	Feb. 20	A year ago
Government Secs.	69.94	68.05	67.80	66.93	66.31	66.28	74.21
Fixed Interest	69.90	68.23	67.36	67.58	67.22	66.95	77.81
Industrial	479.6	468.8	467.0	459.2	456.9	460.5	441.8
Gold Mines	178.0	181.0	185.4	181.6	180.2	179.6	158.9
Gold Mines Ex-$ pm	119.2	120.9	124.0	124.0	123.0	123.0	112.6
Ord. Div. Yield	5.91	6.05	6.08	6.17	6.20	6.16	6.06
Earnings Y'ld % (full)	15.45	15.80	15.88	16.11	16.19	16.10	16.02
P/E Ratio (net) (*)	8.39	8.29	8.16	8.04	8.00	8.05	7.79
Dealings marked	6,606	6,146	5,323	5,451	5,404	6,057	4,783
Equity turnover £m.	—	98.18	124.42	69.53	87.00	82.99	60.06
Equity bargains total	—	17,480	18,578	15,449	16,556	16,978	15,602

10 am 469.2. 11 am 475.5. Noon 476.0. 1 pm 477.4. 2 pm 477.9. 3 pm 478.0.
Latest Index 01-246 8026.
*Nil=8.15.

Basis 100 Govt. Secs 15/10/26. Fixed Int. 1928. Industrial Ord. 1/7/35. Gold Mines 12/9/55. Ex $ premium index started June 1972. SE Activity July-Dec. 1942.

HIGHS AND LOWS

	1978/9 High	1978/9 Low	Since Compilat'n High	Since Compilat'n Low
Govt Secs.	78.58 (4/1/78)	64.64 (6/2/79)	127.4 (9/1/35)	49.18 (3/1/75)
Fixed Int.	81.27 (9/1/78)	65.77 (15/2/79)	150.4 (28/11/47)	50.53 (3/1/75)
Ind. Ord.	535.5 (14/9/78)	433.4 (2/3/78)	549.2 (14/9/77)	49.4 (26/6/40)
Gold Mines	206.6 (14/8/78)	124.1 (22/11/78)	442.3 (22/5/75)	43.5 (26/10/71)
Gold Mines (Ex-$ pm)	132.5 (14/8/78)	90.5 (19/4/78)	337.1 (3/4/74)	54.3 (26/6/76)

S.E. ACTIVITY

	Feb. 27	Feb. 26
Daily		
Gilt Edged	201.1	263.3
Industrials	225.9	191.9
Speculative	41.4	40.6
Totals	150.4	139.9
5-d'y Av'r'ge		
Gilt Edged	204.1	204.6
Industrials	186.3	177.9
Speculative	43.4	44.0
Totals	152.1	129.6

ACTIVE STOCKS

Stock	Denomination	No. of marks	Closing price (p)	Change on day	1978-79 high	1978-79 low
ICI	£1	16	389	+ 7	421	328
Glaxo	50p	15	515	+ 23	648	468
BP	£1	14	£10	+ ¼	£10	720
Barclays Bank	£1	13	416	+ 6	418	298
GKN	£1	13	287	+ 7	298	226
Shell Transport	25p	13	656	+12	666	484
Grand Met.	50p	12	129½	+ 5½	129½	87
Rank Org. 'New'	Nil/pd.	12	32pm	+ 6	34pm	7pm
GEC	25p	11	346	+ 9	349	233
Unilever	25p	11	582	+20	602	476
Beecham	25p	9	643	+10	726	581
European Ferries	25p	9	138½	+ 5	143	89
P. & O. Defd.	£1	9	77½	+ 1½	118	76
Racal Electronics	25p	9	406	+12	406	196
Tate & Lyle	£1	9	140	—	218	133

OPTIONS

DEALING DATES

First Dealings	Last Dealings	Last Declaration	For Settlement
Feb. 20	Mar. 5	May 17	May 30
Mar. 6	Mar. 19	May 31	Jne. 12
Mar. 20	Apr. 2	Jne. 14	Jne. 26

For rate indications see end of Share Information Service

The option market was again very active with calls in Ultramar, Spillers, Tricentrol, Burmah, Premier Oil, Town and City, P & O, Law Land, Prince of Wales Hotels, KCA, Lonrho, Status Discount, William Press, Cons. Gold, Averys, Woodhouse and Rixson, Beatime, M. F. North, Britannia Arrow, Reo Stakis, Bambers, EMI, John Folkes Hefo NY, Associated Fisheries, Charterhall, Country and New Town, Cotah, UDT, Lucas, Burton Warrants and Mams. Puts were dealt in Pleasurama and Racal, and doubles to be arranged included British Land, Premier and Christopher Moran.

NEW HIGHS AND LOWS FOR 1978/9

The following securities quoted in the Share Information Service yesterday attained new Highs and Lows for 1978-79.

NEW HIGHS (254)

BRITISH FUNDS (5)
COMMONWLTH. & AFRICAN LOANS (1)
CANADIANS (1)
BANKS (9)
BEERS (6)
BUILDINGS (18)
CHEMICALS (5)
DRAPERY & STORES (18)
ELECTRICALS (17)
ENGINEERING (13)
FOODS (9)
HOTELS (4)
INDUSTRIALS (47)
INSURANCE (2)
LEISURE (6)
MOTORS (4)
NEWSPAPERS (1)
PAPER & PRINTING (3)
PROPERTY (33)
SHIPPING (3)
SHOES (3)
TEXTILES (2)
TRUSTS (9)
OILS (3)
OVERSEAS TRADERS (2)
RUBBERS (2)
TEAS (5)
MINES (3)

NEW LOWS (2)

COMMONWLTH. & AFRICAN LOANS (1)
Sthn. Rhodesia 2½pc 65-70
INDUSTRIALS (1)
Unochrome

RISES AND FALLS YESTERDAY

	Up	Down	Same
British Funds	78	1	3
Corpns., Dom. and Foreign Bonds	40	8	22
Industrials	786	81	660
Financial and Prop.	349	19	140
Oils	20	5	17
Plantation	23	—	9
Mines	20	86	56
Recent Issues	15	—	14
Totals	1,330	198	926

APPOINTMENTS

Two new Board posts at RHM

Mr. R. F. Lister and Mr. S. G. Metcalfe have been appointed directors of RANKS HOVIS McDOUGALL. They will continue to be responsible for the company's bakery and cereals divisions, respectively. Mr. B. B. Mill has retired as company secretary and is succeeded by Mr. G. A. Garnett.

★

Mr. K. A. Ward and Mr. C. A. E. Anderson, directors of ALBRIGHT & WILSON become, from tomorrow, deputy managing director-finance and administration and deputy managing director-operations, respectively.

★

Mr. John Dobson, an executive with Petrofina UK, is to be the next vice-chairman of the GREATER LONDON COUNCIL. He has been a member for the past nine years, and represents Ealing, Acton. His election will take place on May 15.

★

Mr. L. Rollett has been appointed a director of CLAYTON DEWANDRE HOLDINGS. Mr. J. W. Kinchin, Mr. B. G. L. Jackman and Mr G. H. Shingleton have resigned from the Board. The company was taken over by American Standard (UK) in 1977.

★

Mr. Edward W. Carter has been elected a director of LOCKHEED CORPORATION. He is chairman of Carter Hawley Hale Stores and a director of other companies.

★

Mr. Oliver R. R. de Baer has joined INTERNATIONAL MEXICAN BANK as a general manager.

★

Mr. J. A. Arnold has been appointed director of finance and administration for TENNANT TRADING (METALS).

★

Mr. David A. Gemmell, controller (international) at head office, has been appointed senior manager of the international division, London office, of the ROYAL BANK OF SCOTLAND.

★

Lord Poole has decided to give up his directorship of S. PEARSON AND SON from today.

★

Mr. Rupert N. Hambro, executive director of Hambros Bank, has been appointed to the Board of DINERS CLUB, the international credit card company jointly owned by Diners Club Incorporated and National Westminster Bank.

★

BANRO CONSOLIDATED INDUSTRIES has made the following appointments on the Boards of its subsidiaries: Mr. Terry R. Newman, sales director, and Mr. Denis G. Blagden, technical director of William Bate; Mr. Arthur C. Louis, works director, Edward Rose (Birmingham); and Mr. Neil W. Owen, works director, Edward Rose (Telford).

★

Mr. E. M. Hains has been appointed to the new position of director, road services, P & O EUROPEAN TRANSPORT SERVICES. He retains his existing responsibilities within the group. Mr. G. B. Whitehead becomes director, international services, P & O European Transport Services and takes over responsibility for Ferrymasters and also the marketing, personnel, property and insurance within P & O European Transport Services.

★

Mr. G. A. Witherspoon has been appointed controller of personnel at LLOYD'S REGISTER OF SHIPPING from May 1 to succeed Mr. E. W. Venner, who is retiring.

★

Mr. N. J. Kingston has been appointed director and secretary of the INDEPENDENT TANK STORAGE ASSOCIATION, formed in November 1977 by the principal British-based independent bulk liquid storage companies. Mr. Kingston, a member of the Institute of Petroleum, joined PD Oil & Chemical Storage, a Powell Duffryn company, in 1970.

Mr. N. J. Kingston

★

Mr. Anthony P. Brayford, development manager, Mr. Terence J. Nagle, property manager and Mr. Hunter Peace, project manager, Europe, have been appointed directors of Brixton Estate Deutschland GmbH and Brixton Estate Hochdahl GmbH, the property development subsidiaries of BRIXTON ESTATE in Germany.

★

Mr. W. B. J. Miller, at present managing director of Bass Southampton, is to succeed Mr. M. E. Harding as commercial director of BASS MITCHELLS AND BUTLERS. Mr. Harding is leaving in May to take up personal interests outside the company.

★

Following the take-over by DANA CORPORATION, a restructuring of TURNER MANUFACTURING COMPANY has taken place. Turner and its subsidiary Earby Light Engineers will form part of Dana's Drive-train Division and application has been made for the registration of the trading name Turner-Dana. The other operating subsidiary, H and P-Baelz, will be part of Dana's Industrial Division. In accordance with Dana's general policy for wholly-owned subsidiaries, the non-executive directors of Turner have resigned from the Board, which now consists of Mr. R. B. Dumbell (chairman and managing director), Mr. J. C. B. Day (marketing and sales), Mr. D. W. Evans (industrial relations), Mr. P. J. Horrell (finance), Mr. W. M. M. Morrison (engineering, research and development), Mr. T. Wollam (general manager, transmissions division), Mr. A. J. Caddick (controller and deputy general manager, transmissions division) and Mr. A. A. Martin (president, Dana-Europe). Mr. C. F. Dumbell has been appointed director of international operations, Dana-Europe. Mr. C. G. Drummer (director of planning, Dana-Europe. Mr. C. G. Dummer of H and P-Baelz, and Mr. R. A. Joseph continues as managing director.

★

Mr. Colin Maclean has been appointed publishing director of ABERDEEN UNIVERSITY PRESS.

★

Professor Giannino Parravicini has become chairman of BANCO DI SICILIA to succeed Dr. Ciro de Martino, who has been elected honorary chairman.

★

Mr. R. C. Kemp has been appointed manufacturing director and Mr. A. S. Marshall has become sales and commercial director of E. JOPLING AND SONS, part of the Weir Group's foundries division.

★

Mr. K. S. Parsons will join INTERNATIONAL COMMERCIAL BANK as a general manager from tomorrow. He is at present a senior executive with Midland Bank international division.

★

Mr. I. A. Glendinning, operations manager of S AND A GEOPHYSICAL, has been appointed to the Board.

★

Mr. Clifford J. M. Fairley has been appointed a vice-president of MANUFACTURERS HANOVER TRUST. Mr. John F. Kemp has become general manager of Manufacturers Hanover Export Finance.

★

Mr. Eric T. Yarwood has joined Glynwed as group industrial relations adviser from GEI International, where he was group personnel manager.

★

Mr. J. B. H. Dinan has joined the Board of STRONG AND FISHER (HOLDINGS) as commercial director, and Mr. C. J. Spence as a non-executive director.

★

Mr. Norman Boakes, a senior partner of Export Marketors Partnership, has been appointed a director of ALLIANCE MANAGEMENT CONSULTANTS.

LONDON TRADED OPTIONS

Option	Ex'rc'se price	April Closing offer	April Vol.	July Closing offer	July Vol.	Oct Closing offer	Oct Vol.	Equity close
BP	950	72	1	100	2	124	—	1004p
BP	1000	32	47	66	—	[illegible]	—	"
Com. Union	140	17	21	21	8	24	—	154p
Com. Union	160	4½	55	8	35	12	—	"
Cons Gold	180	35	—	35	13	42	5	207p
Cons Gold	200	15½	51	21	6	28	—	"
Cons Gold	220	6	37	10½	48	16½	19	"
Courtaulds	100	15	10	16½	8	17½	—	111p
Courtaulds	110	7	20	9	8	12½	—	"
Courtaulds	120	2½	—	5	46	7½	3	"
GEC	280	73	5	—	—	—	—	345p
GEC	300	55	11	65	1	74	—	"
GEC	330	26	29	43	15	55	—	"
GEC	360	8½	160	25	—	—	—	"
Grand Met.	100	30	—	33½	1	36	1	129p
Grand Met.	110	21	28	25½	—	26	—	"
Grand Met.	120	11½	35	16½	155	19	10	"
Grand Met.	130	5½	87	10	34	15	8	"
ICI	330	66	38	77	—	81	—	389p
ICI	360	36	25	47	25	54	—	"
ICI	390	11	171	25	7	38	4	"
ICI	420	3½	32	11½	8	—	—	"
Land Secs	220	59	—	64	5	—	—	274p
Land Secs	240	40	10	44	4	53	—	"
Land Secs	260	21	14	29	—	38	—	"
Land Secs	280	7½	15	16½	—	25	—	"
Marks & Sp	70	21	—	22	3	—	—	89p
Marks & Sp	80	11½	—	14	1	18	1	"
Marks & Sp	90	4½	28	7½	50	10½	—	"
Marks & Sp	100	1	14	—	—	—	—	"
Shell	500	162	3	—	—	—	—	654p
Shell	600	62	2	87	—	88	—	"
Shell	650	24	39	61	10	67	—	"
Totals			815		463		48	
		May		August		November		
Boots	180	29	7	34	—	40	—	201p
Boots	200	14½	25	21	—	25	—	"
Boots	220	5½	—	11	5	—	—	"
Boots	240	1½	25	—	—	—	—	"
Boots	260	½	25	—	—	—	—	"
EMI	120	25	5	29	—	32	—	136p
EMI	140	11	6	15	7	21	—	"
EMI	160	4	11	7½	13	—	—	"
ImperialGp	80	11	11	14	10	14½	—	89p
ImperialGp	90	4½	58	6½	64	8	14	"
RTZ	240	82	16	85	—	—	—	295p
RTZ	260	46	10	50	—	—	—	"
RTZ	280	31	27	40	20	46	—	"
RTZ	300	19	1	30	—	38	—	"
Totals			224		119		54	

RECENT ISSUES

EQUITIES

Issue Price p:	Amount Paid Up	Latest Renunc. Date	1978/79 High	1978/79 Low	Stock	Closing Price p:	+ or −	Div. P. or Amount	Times Covered	Gross Yield	P.E. Ratio
65	F.P.	20/2	141	68	Caledonian Hldgs.	141	+18	b7.3	1.6	8.1	11.5
••	F.P.	16/2	150	118	Hunting Assoc. Defd.	150	+5	—	—	—	—
••	F.P.	9/2	41	31	M. Y. Dart Defd.	41	+2	—	—	—	—
95§§	F.P.	—	102	97	Sedgwick F.New10p	102	+5	T5.0	2.1	7.8	9.5

FIXED INTEREST STOCKS

Issue Price	Amount Paid up	Latest Renunc. Date	1978/79 High	1978/79 Low	Stock	Closing Price	+ or −
¶¶	F.P.	16/2	109p	102p	Assoc. Dairies 9¾% Pref.	104p	+1
‡	F.P.	23/2	55p	53p	Chepstow Race'e 5% Cnv. Uns. Ln.1988	55p	.....
100p	F.P.	28/12	100½p	98p	Findlay 8% Cnv. Cum. Red. Prf.	100p	.....
98	£10	—	10	9¼	Mid-Southern Water 8% Red. Pref 1984	10	.....
100p	F.P.	11/1	107p	100½p	Rivington Reed 9¼% Cnv.Cum.Red.Pref.	107p	.....
••		9/3	98p	95p	Shaw Carpets 10% 2nd Cum. Pref.£1	97p	+1

"RIGHTS" OFFERS

Issue Price p:	Amount Paid up	Latest Renunc. Date ●	Latest Renunc. Date ■	1978/9 High	1978/9 Low	Stock	Closing Price p:	+ or −
125	F.P.	9/2	23/3	171	154	Baker Perkins	165	.....
C$21½	Nil	—	—	24pm	18pm	Bank of Nova Scotia	20pm	.....
60	Nil	6/3	27/4	12¼pm	6pm	Burco Dean	12¼pm	+½
220	F.P.	14/2	6/4	276	258	Haslemere Estates	276	+2
60	Nil	—	—	6pm	2pm	Hawkins & Tipson	6pm	+1
67	Nil	7/3	20/4	15½pm	7½pm	Macpherson (D)	15½pm	+1
58	F.P.	26/2	23/3	65	61	Montfort	61	.....
225	Nil	—	—	34pm	7pm	Rank Org.	32pm	+6
27	Nil	—	—	10pm	8pm	Sekers Intl.	10pm	+½
10	F.P.	22/1	23/2	18	14½	Suter Electrical Defd.	18	+½
18	F.P.	14/2	14/3	26¾	23	Swan Ryan Intl.	26¾	+½
315	Nil	—	—	37pm	28pm	Taylor Woodrow	34pm	+4

Renunciation date usually last day for dealing free of stamp duty. b Figures based on prospectus estimate. g Assumed dividend and yield. u Forecast dividend; cover based on previous year's earnings. F Dividend and yield based on prospectus or other official estimates for 1979. q Gross. T Figures assumed. ‡ Cover allows for conversion of shares not now ranking for dividend or ranking only for restricted dividends. § Placing price to public. pt Pence unless otherwise indicated. ¶ Issued by tender. ¶ Offered to holders of ordinary shares as a "rights." ** Issued by way of capitalisation. §§ Reintroduced. ¶¶ Issued in connection with reorganisation, merger or take-over. ‖ Introduction. □ Issued to former preference holders. ■ Allotment letters (or fully-paid). ● Provisional or partly-paid allotment letters. ★ With warrants. †† Unlisted security.

FT-ACTUARIES SHARE INDICES

These indices are the joint compilation of the Financial Times, the Institute of Actuaries and the Faculty of Actuaries

EQUITY GROUPS & SUB-SECTIONS — Figures in parentheses show number of stocks per section

	Equity groups & sub-sections	Tues., Feb. 27, 1979 Index No.	Day's Change %	Est. Earnings Yield % (Max.)	Gross Div. Yield % (ACT at 33%)	Est. P/E Ratio (Net)	Mon., Feb. 26 Index No.	Fri., Feb. 23 Index No.	Thur., Feb. 22 Index No.	Wed., Feb. 21 Index No.	Year ago (approx.) Index No.
1	CAPITAL GOODS (172)	237.59	+2.5	17.06	5.59	8.00	231.78	229.58	226.31	226.95	192.19
2	Building Materials (28)	212.76	+3.5	18.02	6.17	7.64	205.62	202.35	200.05	199.92	154.32
3	Contracting, Construction (28)	356.07	+2.7	21.60	5.72	6.52	346.83	342.87	340.59	339.11	298.76
4	Electricals (15)	573.28	+2.6	13.45	3.31	10.18	558.57	554.11	548.89	542.92	415.42
5	Engineering Contractors (12)	366.00	+3.0	18.40	6.18	7.35	355.34	348.99	347.35	346.71	275.51
6	Mechanical Engineering (73)	180.48	+1.8	18.51	6.15	7.20	177.24	176.04	174.27	174.19	152.11
8	Metals and Metal Forming (16)	162.07	+2.0	17.18	8.87	8.10	158.96	157.05	156.02	155.76	156.55
	CONSUMER GOODS										
11	(DURABLE) (53)	217.67	+2.0	16.22	4.98	8.24	213.35	210.30	207.77	207.80	176.56
12	Lt. Electronics, Radio, TV (16)	287.28	+2.5	13.18	3.64	10.63	280.31	275.95	272.02	272.14	213.79
13	Household Goods (12)	160.62	+0.8	18.47	7.27	7.48	159.34	158.19	157.92	158.00	182.14
14	Motors and Distributors (25)	117.96	+1.4	21.81	7.17	5.76	116.36	115.16	113.66	113.48	106.33
	CONSUMER GOODS										
21	(NON-DURABLE) (170)	219.27	+2.6	15.94	5.93	8.25	213.80	211.62	209.41	209.26	181.85
22	Breweries (14)	232.88	+1.8	16.40	6.46	7.74	228.72	227.02	225.09	224.12	205.46
23	Wines and Spirits (6)	310.66	+1.3	14.95	4.80	9.82	306.58	303.28	301.15	297.54	234.84
24	Entertainment, Catering (17)	294.58	+3.4	14.89	6.43	8.87	284.96	283.51	278.23	275.94	225.28
25	Food Manufacturing (19)	207.81	+3.4	18.08	5.35	7.37	201.04	199.18	198.25	197.68	176.40
26	Food Retailing (15)	250.71	+4.2	12.87	4.70	10.57	240.56	237.78	236.85	237.95	180.22
32	Newspapers, Publishing (12)	390.21	+1.4	21.01	6.27	6.75	384.98	379.93	380.64	382.12	294.39
33	Packaging and Paper (15)	138.04	+1.4	18.34	7.63	7.12	136.12	134.24	133.31	134.81	120.74
34	Stores (40)	203.02	+2.1	12.06	4.69	11.87	198.86	196.01	193.03	193.31	166.79
35	Textiles (23)	175.84	+1.8	18.42	8.65	7.03	172.79	172.21	169.80	169.85	164.28
36	Tobaccos (3)	257.51	+3.5	22.13	7.99	5.19	248.83	246.86	244.38	243.89	225.69
37	Toys and Games (6)	93.28	+2.6	23.79	6.97	4.96	91.81	90.94	90.64	90.48	94.12
41	OTHER GROUPS (99)	204.72	+1.9	15.02	6.17	8.57	200.92	200.26	196.90	195.77	175.35
42	Chemicals (18)	295.49	+1.6	14.99	6.60	8.64	290.70	294.09	285.24	281.72	240.35
43	Pharmaceutical Products (7)	251.64	+2.5	11.03	4.62	10.98	245.60	244.58	242.10	240.41	235.66
44	Office Equipment (6)	135.94	+2.2	14.87	5.98	8.48	133.04	127.13	125.51	125.51	120.88
45	Shipping (10)	418.58	+2.0	14.45	7.26	8.78	410.35	415.10	407.69	406.18	412.01
46	Miscellaneous (58)	220.15	+1.7	17.67	6.54	7.46	216.57	214.10	212.45	212.48	181.32
49	INDUSTRIAL GROUP (494)	227.27	+2.3	16.02	5.83	8.26	222.07	220.12	217.27	216.84	188.55
51	Oils (6)	572.84	+1.4	12.19	3.51	8.92	564.73	563.34	556.47	556.74	421.95
59	500 SHARE INDEX	255.58	+2.2	15.38	5.45	8.36	250.10	248.17	244.98	244.68	208.09
61	FINANCIAL GROUP (115)	181.57	+2.3	—	5.42	—	177.49	175.35	172.10	171.23	156.23
62	Banks (6)	222.67	+2.7	25.28	5.29	5.35	216.80	214.69	206.65	204.86	175.89
63	Discount Houses (10)	234.63	+4.0	—	7.82	—	225.71	225.30	224.79	223.46	190.21
64	Hire Purchase (5)	169.63	+3.0	18.84	5.19	6.81	164.73	160.41	158.47	158.42	141.39
65	Insurance (Life) (10)	133.11	+3.0	—	7.06	—	129.25	128.85	127.01	128.36	130.85
66	Insurance (Composite) (7)	125.90	+3.0	—	6.96	—	122.22	120.14	117.81	118.04	122.66
67	Insurance Brokers (10)	307.87	+1.3	16.16	6.25	8.87	303.81	299.00	299.06	301.99	318.60
68	Merchant Banks (14)	81.02	+1.5	—	6.19	—	79.88	78.47	77.85	77.82	71.23
69	Property (43)	310.14	+1.4	3.45	2.62	46.42	305.91	303.66	300.72	294.78	227.11
70	Miscellaneous (10)	116.75	+1.0	19.35	6.75	6.43	115.63	113.53	112.75	112.44	100.99
71	Investment Trusts (111)	211.43	+1.4	—	5.12	—	208.43	207.88	207.25	207.66	179.02
81	Mining Finance (4)	124.57	−0.3	15.09	5.72	8.16	124.89	124.67	124.23	123.64	86.88
91	Overseas Traders (20)	336.64	+1.7	14.48	7.28	8.78	331.09	328.87	326.67	326.02	263.84
99	ALL-SHARE INDEX (750)	235.76	+2.1	—	5.47	—	230.90	229.05	226.11	225.65	193.37

FIXED INTEREST PRICE INDICES

	British Government	Tues., Feb. 27	Day's change %	xd adj. today	xd adj. 1979 to date
1	Under 5 years	104.49	+1.25	—	1.87
2	5-15 years	112.76	+3.05	—	1.38
3	Over 15 years	116.65	+3.04	—	2.09
4	Irredeemables	129.11	+4.81	—	1.65
5	All stocks	110.88	+2.35	—	1.79

FIXED INTEREST YIELDS Br. Govt. Av. Gross Red.

			Tues., Feb. 27	Mon., Feb. 26	Year ago (approx.)
1	Low Coupons	5 years	9.57	10.00	7.84
2		15 years	11.27	11.70	10.14
3		25 years	12.04	12.45	10.60
4	Medium Coupons	5 years	12.00	12.68	9.92
5		15 years	12.68	13.12	11.16
6		25 years	12.73	13.14	11.32
7	High Coupons	5 years	12.34	12.97	10.57
8		15 years	13.19	13.65	12.08
9		25 years	13.25	13.64	12.17
10	Irredeemables		11.42	11.97	10.34

		Tues., Feb. 27 Index No.	Tues., Feb. 27 Yield %	Mon. Feb. 26	Fri. Feb. 23	Thur. Feb. 22	Wed. Feb. 21	Tues. Feb. 20	Mon. Feb. 19	Fri. Feb. 16	Year ago (approx.)
15	20-yr. Red. Deb & Loans (15)	52.07	14.21	51.97	51.61	51.53	51.48	51.47	51.26	51.23	60.78
16	Investment Trust Prefs. (15)	49.25	14.28	49.25	48.83	48.68	48.68	48.72	48.31	48.19	57.07
17	Coml. and Indl. Prefs. (20)	69.25	13.66	68.30	68.37	68.27	68.28	68.50	67.78	67.76	77.10

‡ Redemption yield. Highs and lows record, base dates and values and constituent changes are published in Saturday issues. A list of the constituents is available from the Publishers, the Financial Times, Bracken House, Cannon Street, London, EC4P 4BY, price 13p, by post 22p.

AUTHORISED UNIT TRUSTS

[illegible]

INSURANCE AND PROPERTY BONDS

[illegible]

OFFSHORE AND OVERSEAS FUNDS

[illegible]

Wren Commodity Trust
10, St. George's St., Douglas IoM 0624 25015

Wren Commod. Tst.	111.7	112.8		—

NOTES

Prices do not include $ premium, except where indicated ‡, and are in pence unless otherwise indicated. Yields % (shown in last column) allow for all buying expenses. a Offered prices include all expenses. b Today's prices. c Yield based on offer price. d Estimated. g Today's opening price. h Distribution free of UK taxes. p Periodic premium insurance plans. s Single premium insurance. x Offered price includes all expenses except agent's commission. y Offered price includes all expenses if bought through managers. z Previous day's price. ♥ Net of tax on realised capital gains unless indicated by ♦. § Guernsey gross. ¶ Suspended. ♦ Yield before Jersey tax. † Ex-subdivision. ‡‡ Only available to charitable bodies.

FT SHARE INFORMATION SERVICE

BRITISH FUNDS

"Shorts" (Lives up to Five Years)

Five to Fifteen Years

Over Fifteen Years

Undated

INTERNATIONAL BANK

CORPORATION LOANS

COMMONWEALTH & AFRICAN LOANS

LOANS

Public Board and Ind.

Financial

FOREIGN BONDS & RAILS

1978-79 High	Low	Stock	Price £	+ or –	Div. % Gross	Red. Yield
24	17	Antofagasta Rly...	22	.....	—	—
41	33	Do. 5pc Pref......	40	.....	—	—
98	98	Chilean Mixed.....	98	.....	—	13.10

BONDS & RAILS—Cont.

U.S. $ & DM prices exclude inv. $ premium

AMERICANS

S.E. List Premium 49½% (based on US$2.0220 per £)
Conversion factor 0.6699 (0.6681)

CANADIANS

S.E. List Premium 49½% (based on $2.4199 per £)

BANKS AND HIRE PURCHASE

BANKS & HP—Continued

Hire Purchase, etc.

BEERS, WINES AND SPIRITS

BUILDING INDUSTRY, TIMBER AND ROADS

CHEMICALS, PLASTICS

CHEMICALS, PLASTICS—Cont.

DRAPERY AND STORES

ELECTRICAL AND RADIO

ENGINEERING MACHINE TOOLS

ENGINEERING—Continued

FOOD, GROCERIES, ETC.

HOTELS AND CATERERS

INDUSTRIALS (Miscel.)

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MINES—Continued

AUSTRALIAN

1978-79 High	Low	Stock	Price	+ or —	Div. Net	C'vr	Y'ld Gr's
15	9	Acmex	14	......	—	—	—
171	64	Bougainville 50 Toea	164	−2	Q15c	1.4	5.9
140	63	BH South 50c	140	..	—	—	—
820	150	Central Pacific	425	......	—	—	—
336	148	Conzinc Riotinto 50c	308	......	¶Q10c	ϕ	2.0
32	19	Cultus Pacific N.L.	32	..	—	—	—
27	9½	Endeavour 20c	19	−½	—	—	—
92	45	G.M. Kalgoorlie $1	92	......	—	—	—
68	18	Haoma Gold N.L.	35	......	—	—	—
167	81	Hampton Areas 5p	158	−6	ϕt3.55	2.0	3.4
44	10	Metals Ex. 50c	43	−1	—	—	—
275	125	M.I.M. Hldgs. 50c	268	−2	†Q9c	1.7	1.9
22	10	Minefields Expl.	15	......	—	—	—
74	10	Mount Lyell 25c	68	......	—	—	—
43¾	11¾	Newmetal 20c	22	......	—	—	—
143	79	North B. Hill 50c	134	−1	Q8c	1.3	3.4
22	8½	Nth. Kalgurli	21	−½	—	—	—
50	12	Nth. West Mining	35	......	—	—	—
178	115	Oakbridge $A1	123	......	Q12c	1.9	5.5
42	10	Oilmin N.L.	31	......	—	—	—
121	30	Pacific Copper	118	......	—	—	—
£15½	725	Pancont'l 25c	£10	......	—	—	—
40	12	Paringa Mg&Ex 5p	22½	......	—	—	—
570	310	Peko-Wallsend 50c	482	−2	Q15c	3.3	1.8
300	50	Southern Pacific	177	......	—	—	—
184	84	Westn. Mining 50c	183	+3	†Q3c	0.7	0.9
11	7	Westmex	11	......	—	—	—
100	35	Whim Creek 20c	65	......	—	—	—

TINS

1978-79 High	Low	Stock	Price	+ or —	Div. Net	C'vr	Y'ld Gr's
30	23	Amal. Nigeria	29	......	2.81	1.3	14.4
435	240	Ayer Hitam $M1	385	......	Q300c	0.5	16.7
60	45	Beralt Tin	56	......	4.0	ϕ	10.7
305	190	Berjuntai $M1	250	......	†Q110c	1.0	10.4
185	111	Geevor	155	......	H5.57	5.8	5.4
11	8½	Gold & Base 12½p	9	......	—	—	—
350	220	Gopeng Cons.	320	......	18.0	1.4	8.4
340	130	Hongkong	340	......	12.5	ϕ	5.5
93	64	Idris 10p	68	......	‡12.0	1.6	‡
11	7	Jantar 12½p	9½	......	—	—	—
84	63	Kamunting $M0.50	75	......	†Q12.5c	2.1	3.6
320	133	Killinghall $M1	320	......	—	—	—
470	280	Malay Dredging $M1	430	......	Q175c	0.7	8.7
78	40	ΔPahang	44	......	—	—	—
78	50	Pengkalen 10p	70	......	4.5	ϕ	9.6
270	165	Petaling $M1	230	......	Q120c	1.9	11.2
87	49	Saint Piran	83	......	†2.03	6.5	3.6
70	47	South Crofty 10p	57	......	†4.19	2.0	11.0
245	140	South Kinta $M0.50	175	......	†.Q145c	0.6	17.8
370	230	Sthn Malayan $M1	350	......	Q190c	1.0	11.7

COPPER

MISCELLANEOUS

GOLDS EX-$ PREMIUM

$15¼	$10¼	Buffels R1	$12½	−⅛	Q190c	ϕ	17.5
$11¼	830c	East Drie R1	$10⅛	−⅛	Q115c	ϕ	12.9
585c	330c	East Rand Prp R1	410c		Q10c		—
$28¼	$16½	F.S. Geduld 50c	$23¼	−⅛	Q315c	2.4	15.7
$15¼	975c	Pres. Brand 50c	$13⅛	−¼	Q150c	[illegible]	[illegible]
$13⅝	900c	St. Helena R1	$12⅞	−⅛	Q190c	[illegible]	[illegible]
550c	313c	Stilfontein 50c	535c	−10	Q66c	[illegible]	[illegible]
$23⅞	$16¼	Vaal Reefs 50c	$23	−⅛	[illegible]	[illegible]	[illegible]
$37	$25	West Drie R1	$31½	[illegible]	[illegible]	[illegible]	[illegible]
$31¼	$19	West Hldgs. 50c	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
$13	895c	Western Deep R2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Unless otherwise [illegible] and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on the basis of net distribution; bracketed figures indicate 10 per cent. or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution. Yields are based on middle prices, are gross, adjusted to ACT of 33 per cent. and allow for value of declared distributions and rights. Securities with denominations other than sterling are quoted inclusive of the investment dollar premium.

Δ Sterling denominated securities which include investment dollar premium.
• "Tap" Stock.
* Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
† Interim since increased or resumed.
‡ Interim since reduced, passed or deferred.
‡‡ Tax-free to non-residents on application.
ϕ Figures or report awaited.
†† Unlisted security.
# Price at time of suspension.
¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividends or forecasts.
◆ Merger bid or reorganisation in progress.
♣ Not comparable.
♠ Same interim: reduced final and/or reduced earnings indicated.
ϕ Forecast dividend; cover on earnings updated by latest interim statement.
‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
★ Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
♥ Excluding a final dividend declaration.
♦ Regional price.
II No par value.
a Tax free. b Figures based on prospectus or other official estimate. c Cents. d Dividend rate paid or payable on part of capital; cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. v Tax free up to 30p in the £. w Yield allows for currency clause. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Issue price. F Dividend and yield based on prospectus or other official estimates for 1979-80. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1978-79. K Figures based on prospectus or other official estimates for 1978. M Dividend and yield based on prospectus or other official estimates for 1978. N Dividend and yield based on prospectus or other official estimates for 1979. P Figures based on prospectus or other official estimates for 1978-79. Q Gross. T Figures assumed. Z Dividend total to date. ‡‡ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xd ex capital distribution.

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Albany Inv. 20p	26	......	Sheffield Brick	55	+1
Ash Spinning	106	......	Sheff. Refrshmt	70	......
Bertam	20	......	Sindall (Wm.)	120	......
Bdg'wtr. Est. 50p	345	+5			

IRISH

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FINANCIAL TIMES

Wednesday February 28 1979

Fears that Vietnam conflict may grow

BY OUR FOREIGN STAFF

CHINA has made it clear that it is not prepared to withdraw its forces from Vietnam until Hanoi agrees to negotiate on border issues. The warning, in the People's Daily newspaper, came amid reports that the 11-day conflict might grow.

Late last night the New China News Agency claimed that Vietnam had struck back, sending forces 25 km (15 miles) into Chinese territory.

It said that Chinese and Vietnamese forces had fought for three days in the Ninming area of the Guangxi Zhuang (Kwangsi Chuan) autonomous region. The Chinese, the agency said, killed 68 Vietnamese troops and captured one, repulsing the attack.

Fighting in Vietnam continues around the strategically vital city of Lang Xon, which controls the approaches to Hanoi.

President Jimmy Carter, meanwhile has called on the Chinese to pull back their forces. A senior U.S. official in the area disclosed yesterday that Washington had been warned beforehand of Chinese intentions.

Mr. Carter's message to was delivered to Mr. Deng Xiaoping (Teng Hsiao-Ping), the Chinese Vice-Premier, by Mr. Michael Blumenthal, the U.S. Treasury Secretary, who is on an official visit to China.

Mr. Blumenthal said later: "I conveyed the position of the U.S. Government with respect to the Chinese move into Vietnam and indicated our opposition to that move and our hope that there will be a speedy withdrawal from Vietnam."

However, Mr. Deng told U.S. journalists accompanying Mr. Blumenthal that world opinion appeared to be favourable to China's move. Asked if China's withdrawal from Vietnam and a Vietnamese pull-back from Cambodia were linked, he said: "There is reason to link them, but we do not wish to do that."

He added: "We have no other aims than to explode the myth that is Vietnam's claim to be the third strongest military power in the world and we have no desire for territory."

[In Bangkok Mr. Warren Christopher, U.S. Deputy Secretary of State, disclosed that during his recent U.S. visit Mr. Deng had foreshadowed the possibility of a Chinese invasion of Vietnam and that President Carter, "in the strongest terms he could find," had discouraged China.

The leading Soviet Politburo member, Mr. Andrei Kirilenko, accused the West of "assistance by some capitalist states for the militarisation of China and connivance at its expansionist gambles." He maintained that the Vietnamese were "rebuffing" the Chinese invasion on their own, but repeated the Soviet pledge that they had "reliable frends" if needed.]

Yesterday's editorial article in the People's Daily, which reflects government policies, said: "Only by negotiations between the two sides can the border conflicts be solved."

Vietnamese refusal so far to engage in negotiations, and the "armed provocations" it was staging could "create tensions in China's border areas for a long time to come."

Some observers in Peking interpreted that as a warning that the invasion would continue for a long time unless Vietnam came to the negotiating table. But a view more widely held in diplomatic quarters was that China was restating its known position and emphasising that, despite worldwide condemnation of its actions, it was still looking for positive gains from its Vietnam venture.

The editorial, coupled with reports of Chinese penetration of as much as 25 miles into Vietnam at one point, was regarded as potentially worrying because of its uncompromising tone. It is one of the few public statements made in China about the war so far. Little if any detailed information has been officially available in Peking over the past 10 days apart from reports from foreign ambassadors and other visitors meeting senior ministers.

The military line-up, Page 4
Editorial Comment, Page 22

UK oil groups ration supplies

BY KEVIN DONE, ENERGY CORRESPONDENT

SEVERAL UK oil companies have started to ration supplies of oil products, such as petrol, heating oil, diesel and fuel oil, to their dealer and distributor networks, because of the shortage of crude oil on world markets.

Texaco, Burmah and Total have told some customers that supplies of particular products could be cut back by 15 to 20 per cent. Other major suppliers to the UK market, such as British Petroleum, Esso and Shell, are understood to be monitoring product deliveries very carefully to hold customers to the same level of supplies they bought in February and March last year.

The product allocations instituted by Texaco, Burmah and Total are the first clear signs that the shortage of crude oil in world markets, caused by the halting of Iranian exports, is beginning to bite in the UK oil market.

About 4.4m barrels a day of crude oil—a total of 400m barrels—has been lost to world markets in the last three months because of the turmoil in Iran. In the short-term this has been made up partly by increased production from Saudi Arabia and some other OPEC producers and partly by the reduction of stocks in the oil-consuming countries.

Some oil companies have fared better than others in making up the shortfall in crude supplies, but most of the world's major oil companies have warned their crude oil customers and their own affiliate companies that crude supplies would be cut back to by between 10 and 45 per cent.

Now, as those cuts in crude oil deliveries feed through the world supply system, some UK companies are having to reduce product deliveries.

Burmah has entirely stopped supplying bulk oil products to non-contract customers. This is only a small part of its business and chiefly affects its third-party petrol sales.

It is also rationing all its dealers and tenants to deliveries equivalent to 80 per cent of their supplies in February and March last year. Burmah supplies about 800 service stations in the UK, trading under both the Burmah and the Apex brand names.

Texaco has introduced an allocation system for deliveries of middle distillates, products such as heating oil, gas oil and disel. Texaco customers have been warned they could be cut back to a level of 85 per cent of the supplies they received in February and March, 1978.

Spot prices

Texaco has been buying into the UK some extra product supplies at the vastly inflated spot prices now ruling the open market. It had bought spot supplies of gasoline and gas oil —for which prices have been up at a peak of as much as $360 a tonne recently. At the beginning of this year, spot prices were nearer $205 and $170 a tonne for these products.

Spot purchases can only be sold at a heavy loss, but Texaco is hoping to be able to bring supplies for March at least up to the level of last year by this method.

Total has written to all its industrial and retail customers to warn them that next month they will be cut back to 85 per cent of last year's supplies.

Total, which supplies about 900 service stations, has also released its dealers from their contractual supply obligations. It has told them they are free to take supplies from other sources, if they are available.

Member countries of the International Energy Agency — the grouping of the world's major oil consuming nations including Britain — will meet in Paris tomorrow to discuss world oil supplies. Countries are likely to agree to introduce voluntary conservation measures which could cut oil demand by up to 5 per cent.

THE LEX COLUMN

Taste of freedom in gilt-edged

Yesterday's 3-point rise in long-dated gilts leaves the Government Securities Index 8.2 per cent higher in 13 trading days—a recovery steeper than that of January, 1977. Last Friday the market was left untapped to allow it to find a level, but rather than consolidating, it has raced ahead.

After all the funding crises of the last year it must go against the official grain not to be tapping a bull market. One danger for the authorities is that gilts will jump to a new higher level quite quickly, possibly making funding difficult again in the summer. There is now the choice between bringing Minimum Lending Rate back down with a bang or in reluctant steps, but in the short term MLR policy may make very little difference to the gilt-edged market.

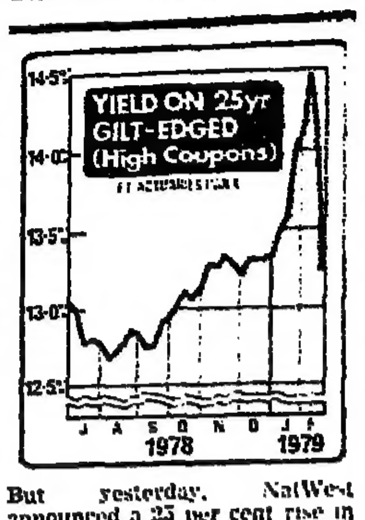
Issuing a new tap will take strong nerves. The Bank cannot afford a repeat of last week's debacle with another partly-paid stock, but a fully-paid and very large long might do the trick. It would presumably be intended to mop up inflows of foreign money rather than to fund; there is no real need for domestic funding before the May banking month. These inflows, though substantial, should not reach the scale of 1976-77 when sterling was recovering from an oversold position and foreign speculation in gilts was actively encouraged by currency considerations.

Yesterday the gilt-edged market was dragging the equity market up in its wake, but the real message of recent bizarre developments is that once again the public sector has solved its problems at the expense of private industry and commerce. The public sector is disguising its ugly fiscal blemishes with the pure white garments of monetary rectitude. It is true that yesterday Finance for Industry opportunistically launched a new eurosterling bond with a coupon of 13 per cent. Yet even if this issue goes well there is hardly likely to be a rush to follow. British company finance directors are still priced right out of the market by long-term rates at anything like this level.

Natwest

Things finally seem to be looking up National Westminster—once the country's most profitable clearing bank. The collapse of property prices during the mid-1970s, heavy and unproductive spending on huge capital projects and the need to establish a large international presence rapidly, have all taken their toll of the group's profits in recent years.

Index rose 10.8 to 479.6



But yesterday, NatWest announced a 25 per cent rise in pre-tax profits to £297m, much in line with Barclays performance last week, and there are signs that with capital spending starting to tail off sharply the group's performance in future could start at least to match that of Barclays—the market leader.

Of course, NatWest's performance in 1978, in common with Barclays, had a lot to do with the much lower charge for bad and doubtful debts. On a total loan book of just under £15bn NatWest charged £32m against profits last year compared with a figure of £23m in the case of Barclays which boasts advances of £17bn. NatWest's net loan losses of £19.5m were much lower than Barclay's £37.7m but then a total provision of £400m at Barclays overshadowed NatWest's £239m—even allowing for the differing tax treatments.

It will be some time yet before conclusions can be drawn about the prudence of either banks' provisioning but in the meantime NatWest's international business increased its contribution by 17 per cent which compares favourably with the lacklustre overseas performance at Lloyds and Barclays. Meanwhile, domestic banking profits were up by over a third and in the case of related banking services there was an increase of around a seventh. Up 17p yesterday, to 327p, NatWest's shares are now selling on a multiple of 4½.

Commercial Union

Commercial Union's profits rise from £99.8m to £142.2m pre-tax translates into a much more pedestrian performance in terms of earnings per share, because of its big equity issues in 1977. But further modest progress is on the cards, despite the underwriting downturn which the group expects in the U.S. this year. Underwriting losses in Holland could be several million pounds, the rate of increase in investment income is set to rise from last year's 10 per cent, to a big uplift in cash following the swing into wide underwriting profits last year.

CU thinks that the next turn in the international underwriting cycle will be less severe than the last. When this happens, the key point is that exposure to stock market and underwriting risks has been dramatically reduced in the last few years. Its solvency margin is over 58 per cent, compared with about 40 per cent in 1974. Equity-type investments now represent around 85 per cent of shareholders' funds, against nearer 200 per cent six years ago. The ratio of outstanding claims, unearned premiums and the marine fund to net worth has fallen from roughly 3½:1 to about 2:1.

In other words, the group would now be far better placed to withstand the kind of whirlwind that shook its very foundations in 1974-75. The dividend should be secure enough at 29p where the yield is 8½ per cent, covered 2½ times.

IMI

Business was good for IMI in most areas last year—except zip fasteners—and volume improved by around 5 per cent. So the fact that this went hand in hand with a shrinkage in margins says a good deal about the difficult conditions in which much of British industry is working, and which are likely to dominate the engineering results season now starting. Zips contributed £3m less to profits because of rising imports of finished garments into the European market, and the group's pre-tax profits are up £2m to £32m.

Home improvement demand is booming, and Glynwed's plant strikebound for a period last autumn, copper tubes have been buoyant, and heat exchangers have also done well. But while domestic margins have been maintained, export profitability has suffered; and the current year has got off to a bad start with the strikes and disruption in January. Prospects are somewhat better for later in the year, but the quality of IMI's earnings is overshadowed by the £8.5m below the line provision made last year against rationalisation costs, mainly in zips. However, the 8.8 per cent yield is well covered.

Finance for Industry issues £10m Eurosterling bond

BY NICHOLAS COLCHESTER

FINANCE FOR INDUSTRY, an agency owned by the clearing banks and the Bank of England has issued a £10m Eurosterling bond. The move is prompted by increasing overseas interest in British Gilts and is the first such bond to have been issued since last April.

The new bond will carry a coupon of 13 per cent and will be priced at par. The bond will mature in 1991, though its average life will be nine years. The coupon compares with the coupons of 9¾ per cent and 10 per cent at which FFI was able to float its two previous Eurosterling bonds in the winter of 1977-78.

Eurosterling bonds are denominated in external sterling—British residents can buy them only through the dollar premium. They are tailored for foreign buyers. Such issues are introduced when the combination of British interest rates and the outlook for sterling appear favourable to overseas investors.

The anonymity with which investors can buy sterling Eurobonds, and other technical advantages, mean that the yield on such bonds is usually lower than that available on the equivalent gilt-edged stock. The borrower can thus borrow more cheaply than in the domestic bond market; he also has the advantage of being able to repay such a debt early.

Finance for Industry, and its subsidiary the Industrial and Commercial Finance Corporation, have a continuing need for fixed rate finance with which to make long-term loans to small British companies and for major industrial projects.

The FFI bond is being organised by S. G. Warburg. The presence of Nomura Securities and Merrill Lynch in the managing group reflects the international demand that is expected.

Eurobonds, Page 29

U.S. arms speed-up to North Yemen

By Richard Johns in Riyadh and James Buxton in London

THE U.S. has made a significant gesture of support for North Yemen, engaged in heavy fighting along the border with South Yemen, by announcing that it is speeding up deliveries of more than $100m (£49.4m) worth of arms. It also plans to send a further $400m (£197.6m) worth over a longer period, subject to Congressional approval.

The announcement follows a statement by Dr. Harold Brown, the Defence Secretary, that the U.S. is prepared to defend its vital interests with force if necessary. The initial package of arms deliveries, which are being paid for by Saudi Arabia, was agreed some time ago. The timing of the announcement is intended to reassure Saudi Arabia, which regards the fighting between the two Yemens as a part of a Soviet-inspired plot to bring down the pro-Saudi regime in North Yemen.

The $100m arms package involves artillery, anti-aircraft and anti-tank guns, and missiles. The second package includes 12 F5E fighters, 100 armoured troop carriers and 60 M60 tanks.

In Riyadh, the Saudi Arabian capital, Mr. Mahmoud Riad, secretary-general of the Arab League, said that South Yemen had agreed to attend an emergency Arab League meeting called for by North Yemen. It is hoped that the meeting, at Foreign Minister level, can be convened by Saturday, but a venue has not yet been decided.

North and South Yemen have accused one another of starting the fighting, which broke out last Friday and was continuing yesterday. But the South Yemen-backed National Democratic Front—a North Yemeni opposition group—has announced on Aden radio the capture of all the main North Yemeni border towns, a claim largely confirmed by North Yemen. Few observers doubt that South Yemeni regular troops and militia are engaged in the fighting alongside the rebels.

Prince Saud al-Faisal, the Saudi Foreign Minister, indicated yesterday after talks with the South Yemeni Foreign Minister that the forthcoming visit to Riyadh by South Yemeni President Abdul Fateh Ismail would be postponed until the conflict was resolved.

Mrs. Thatcher urges Scots to vote 'No'

BY ELINOR GOODMAN, LOBBY STAFF

AMID GROWING evidence that the referendums may not produce a decisive vote in favour of devolution, even in Scotland, Mrs. Margaret Thatcher, Leader of the Opposition, yesterday urged the Scottish electorate to vote "No" and preserve the unity of the U.K.

Mrs. Thatcher, who until now has not taken a very active part in the campaign, emphasised, however, that a "No" vote would not resolve the question of devolution. It would open up the way for all-party talks, which the Conservatives have long advocated.

Mrs. Thatcher's call was made in a message to the president of the Scottish Conservative and Unionist Association. It was a departure from her earlier preference for leaving Scottish and Welsh Conservatives to campaign for a "No" vote.

Some Scottish Conservatives, worried about reports that as many as a fifth of their supporters may support the assembly, were annoyed at the way the Prime Minister used his appearance on BBC television on Monday night to call for a "Yes" vote. They felt that Mrs. Thatcher should be given a chance to reply.

In a continuation of the dispute about how broadcasting time should be allocated to the different interests, Conservative Central Office was putting pressure on the BBC last night to provide an equally prominent spot on television for a senior Conservative to put the "No" case.

They wanted a broadcast to go out tonight in prime time on the eve of the poll.

Although "Yes" campaigners in Scotland are still confident that a majority will support the proposed assembly, the latest polls suggest that the Government will be lucky if the result meets the requirement that 40 per cent of those eligible to vote should endorse the proposal for the assembly to be set up automatically.

A poll published yesterday showed that the Confederation of British Industry was accurately reflecting the views of the business community when it came out against the proposed assemblies. According to the poll, carried out for the BBC Money Programme, only 10 per cent of businessmen in Scotland and 8 per cent of those in Wales support the assemblies.

Referendum news, Page 10

Banks fear car leasing tax relief may be cut

BY MICHAEL LAFFERTY, BANKING CORRESPONDENT

THE BIG London clearing banks are worried that the Government may announce changes in the tax law on car leasing in the budget on April 3.

Such a move could restrict the growth of a business which multiplied more than six times in 1978 to £347m.

These fears became clear yesterday when National Westminster Bank, the third of the clearers to report 1978 results, disclosed that it is retaining a deferred tax provision of £125m, mainly against the possibility of future claw-backs of investment allowances on leasing.

It is understood that over £100m of this provision is for car leasing.

National Westminster is providing for 40 per cent of its total potential deferred tax liability on leasing business. This compares with a 25 per cent provision by Barclays Bank.

Lloyds Bank, however, has made no provision for deferred tax on its leasing business. Lloyds justifies this by saying its leasing of expensive capital equipment is different from car leasing, which is short-term.

Confirmation that tax changes are at least being considered in this area came last night from the Equipment Leasing Association. Mr. Tom Clark, ELA chairman, said that his association has had talks with the Inland Revenue.

The most likely change Mr. Clark envisages concerns "the anomoly which exists on cars costing more than £5,000 whereby leasing companies can get full tax relief in the year of purchase."

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Iran oil exports

ment, provided certain conditions were met.

Mr. Nazith, who visited the southern Iranian oil fields yesterday, ruled out future oil barter deals, except perhaps for agricultural goods.

The level to which Iran will be ready to build up oil production is still unclear. Mr. Mohammad Ali Narvegh, NIOC's deputy chairman, said that production was now rising to 1.5m barrels a day, of which 800,000 barrels would be set aside to meet domestic demand.

Before the crisis Iran was producing up to 6m barrels a day. Mr. Mehdi Bazargan, the Prime Minister, said in a radio interview that Iran hoped to return to 60 per cent of previous production, about 3.6m barrels a day, in two months.

The shortage of crude oil on world markets is still putting mounting pressure on prices, however, and Iran's move to auction its first production can only exacerbate the position.

Kuwait and Oman yesterday joined Abu Dhabi, Qatar and Libya by announcing further price rises above the increases agreed by OPEC in December. Kuwait is adding $1.20 a barrel to its first-quarter price of $12.83 a barrel.

The increases which take effect from February 20, have been brought in as a "temporary surcharge." Kuwait said yesterday that customers would be informed during March of the new price for the second quarter.

Continued from Page 1

Begin

pects the next stage to be bilateral discussions between Israel and the U.S. to clarify issues.

Roger Mathews reports from Cairo: Mr. Khalil rejected Mr. Begin's claim that no progress had been made at the Camp David talks.

Egyptian officials said that for Mr. Carter to have called the summit meant that limited progress had been made last week. But with further concessions being demanded from Mr. Begin it was half-expected that he might stay away.

German truck maker strengthens U.S. link

BY ADRIAN DICKS IN BONN

MASCHINENFABRIK AUGSBURG-NUERNBERG, the West German commercial vehicles and engineering group, appears to have consolidated its foothold in the North American market by signing a letter of intent which will lead it to taking up a majority in White Motor, the U.S. truck manufacturer.

Last night, MAN did not state what proportion of White it would acquire beyond a 50 per cent majority, but that it was prepared to buy up to 9.6m ordinary shares at $8 each.

This investment of up to about $76m (£37.6m) comes a little more than five months after MAN paid $15.6m (£7.7m) for a 12.6 per cent stake in White. On that occasion it paid $13 per share.

Last night's announcement was no surprise, following the DM200m capital increase, to DM625m (£169m), by Gutehoffnungs-Huette Aktienverein, which owns some 76 per cent of MAN. At that time Herr Manfred Lennings, the GHH chairman, remarked that the group had to be in a position to act quickly if opportunities arose.

The expansion of MAN's stake, which has still to be approved by the boards of both companies, White shareholders and the U.S. authorities, would appear to put the German company a move or two ahead of other European heavy vehicle builders currently seeking a major presence in North America.

One of the immediate attractions of White for MAN is the U.S. company's network of 280 dealers and 25 directly-owned service centres in Canada and the U.S. which MAN believes could be readily used to market either a new range of vehicles or current MAN trucks assembled in the U.S.

John Wyles in New York writes: MAN's bid reflects White Motor's current capital weakness in a highly competitive market. It is one of the smaller heavy truck makers with a market share of just under 7 per cent, and several years of slim margins have left it with little surplus capital.

Weather

UK TODAY

SHOWERS in all areas, with some sunny spells. Max. 7C (45F).

London, S. England, E. Anglia, Midlands, E. England, Channel Isles, S. Wales

Sunny periods and showers.

N. Wales, N. England, Isle of Man, Ulster

Sunny intervals, blustery showers.

Borders, S. Scotland

Sunny intervals, wintry showers. Rather cold.

Highlands, N. Scotland, Islands

Sunny intervals, frequent heavy showers.

● **Outlook:** Showers with some sleet or snow in the north. Some night frost.

WORLDWIDE

		Y'day midday °C	°F			Y'day midday °C	°F
Zurich	S	−1	30	Lisbon	S	12	54
Ajaccio	S	9	48	Locarno	S	5	41
Algiers	C	10	50	London	F	6	43
Amsdm.	C	4	39	Luxmbg.	S	4	39
Bahrain	S	25	77	Madrid	S	8	46
Barclna.	F	10	50	Majorca	F	11	52
Beirut	R	13	55	Malaga	S	15	59
Belfast	R	6	43	Malta	C	11	52
Belgrd.	S	3	37	M'chstr.	C	7	45
Berlin	Sn	−1	30	Melbne.	R	17	63
Biarritz	S	10	50	Mex. C.	S	21	69
Bmghm.	C	5	41	Milan	S	6	43
Bordx.	S	7	45	M'ntreal	C	−4	25
Boulgn.	S	5	41	Moscow	C	−2	28
Bristol	F	8	46	Munich	S	−1	30
Brussels	S	5	41	Nairobi	S	25	76
Budpst.	S	2	36	Naples	C	6	43
B. Aires	S	33	91	Nwcstl.	C	7	45
Cairo	S	22	72	N. York	Sn	3	38
Cardiff	C	8	46	Nice	C	8	46
Cas'b'ca	F	14	57	Oporto	S	13	55
Cape T.	C	21	70	Oslo	S	6	43
Chicago	S	−2	28	Paris	S	7	45
Cologne	F	4	39	Perth	S	28	82
Cpnhgn.	R	1	34	Prague	S	3	37
Corfu	F	12	54	Reykjvk.	C	−2	28
Dublin	R	8	46	Rhodes	S	16	61
Dbrvnk.	R	9	48	Rio J'o	S	33	91
Ednbgh.	C	8	46	Rome	F	7	45
Faro	S	15	59	Salzb'rg	S	0	32
Florence	F	6	43	Singapr.	S	28	82
Frankft.	S	3	37	Stckhm.	S	4	39
Funchal	C	15	59	Strasbg.	S	5	41
Genova	S	1	34	Sydney	S	25	77
Gibrltr.	S	14	57	Tangier	S	15	59
Glasgow	R	7	45	Tehran	S	14	58
G'rnsey	F	2	36	Tel Aviv	S	19	66
Helsinki	F	3	37	Tenerife	C	13	55
H. Kong	C	19	66	Tokyo	R	4	39
Innsbrk.	S	0	32	Toronto	S	−2	28
Invrnss.	F	8	46	Tunis	C	9	48
I.o.Man	R	7	45	Valencia	F	12	54
Istanbul	F	7	45	Venice	S	3	37
Jersey	S	8	46	Vienna	S	3	37
Jo'burg	S	27	80	Warsaw	S	1	34
L. Plms.	F	18	64				

C—Cloudy. F—Fair. Fg—Fog. R—Rain. S—Sunny. Sl—Sleet. Sn—Snow.

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